

Table S1 Sources and description of summary-level data

Trait	abbrev	case	ctl	all	Discovery ancestry
Crohn's disease	CD	20,873	346,719	367,592	EUR, EAS
Dermatopolymyositis	DMPM	500	374,317	37,817	EUR
Guillain-Barre syndrome	GBS	551	491,583	492,134	EUR
Graves' disease	GD	4,487	629,598	634,085	EUR, EAS
Hashimoto's thyroiditis	HT	16,191	552,642	568,833	EUR, EAS
Myasthenia gravis	MG	560	495,667	495,667	EUR
Multiple sclerosis	MS	4,888	10,395	15,283	EUR
Neuromyelitis optica	NMO	215	1,244	1,459	EUR
Psoriasis	-	5,278	650,391	655,669	EUR, EAS
Rheumatoid arthritis	RA	31,313	995,377	1,026,690	EUR
Systemic lupus erythematosus	SLE	8,798	16,470	25,268	EUR, EAS
Systemic sclerosis	SSC	313	499,508	499,821	EUR
Sjögren syndrome	SS	3,309	484,260	487,569	EUR

Type 1 diabetes	T1D	18,942	501,638	520,580	EUR
Ulcerative colitis	UC	22,318	353,190	375,508	EUR, EAS
Ankylosing spondylitis	AS	1,705	496,755	498,460	EUR
Venous thromboembolism	VTE	81,190	1,419,671	1,500,861	EUR

Table S2 Shared pleiotropic genes identified by MAGMA between VTE and ADs

GENE	CHR	START	STOP	NSNPS	N	ZSTAT	P	SYMBOL	Disease Pair
ENSG00000081026	1	113933371	114228545	1	1500860	5.6767	6.8657E-09	MAGI3	vte_hashimoto
ENSG00000143153	1	169074935	169101960	2	1500860	5.3885	3.5518E-08	ATP1B1	vte_hashimoto
ENSG00000143156	1	169101769	169337205	2	1500860	6.1094	5E-10	NME7	vte_hashimoto
ENSG00000117477	1	169364108	169429907	3	1500860	6.2602	1.9225E-10	CCDC181	vte_hashimoto
ENSG00000117479	1	169433147	169455241	1	1500860	5.8344	2.6986E-09	SLC19A2	vte_hashimoto
ENSG00000198734	1	169483404	169555826	15	1500860	5.546	1.4618E-08	F5	vte_hashimoto
ENSG00000174175	1	169558087	169599431	1	1500860	5.6648	7.3602E-09	SELP	vte_hashimoto
ENSG00000000460	1	169631245	169823221	1	1500860	6.7168	9.2856E-12	C1orf112	vte_hashimoto
ENSG00000000457	1	169818772	169863408	1	1500860	5.3665	4.0144E-08	SCYL3	vte_hashimoto
ENSG00000115718	2	128176003	128186822	1	1500860	6.0087	9.3504E-10	PROC	vte_hashimoto
ENSG00000164344	4	187130133	187179625	9	1500860	5.1592	1.2397E-07	KLKB1	vte_hashimoto
ENSG00000088926	4	187187099	187210835	7	1500860	7.8659	1.8319E-15	F11	vte_hashimoto
ENSG00000272297	4	187347700	187476464	10	1500860	6.7838	5.8538E-12	RP11-215A1	vte_hashimoto
ENSG00000204344	6	31938868	31950598	1	1500860	5.5966	1.0927E-08	STK19	vte_hashimoto
ENSG00000196735	6	32595956	32614839	1	1500860	5.3783	3.7601E-08	HLA-DQA1	vte_hashimoto
ENSG00000179344	6	32627244	32636160	1	1500860	6.0068	9.4634E-10	HLA-DQB1	vte_hashimoto
ENSG00000148297	9	136205160	136214986	1	1500860	6.3673	9.6209E-11	MED22	vte_hashimoto
ENSG00000198870	9	136243117	136271220	1	1500860	5.449	2.5322E-08	C9orf96	vte_hashimoto
ENSG00000160323	9	136279478	136324508	2	1500860	6.1094	5E-10	ADAMTS13	vte_hashimoto
ENSG00000160326	9	136336217	136344259	2	1500860	6.1094	5E-10	SLC2A6	vte_hashimoto
ENSG00000180210	11	46740730	46761056	1	1500860	5.9226	1.584E-09	F2	vte_hashimoto
ENSG00000175216	11	46764598	46867847	6	1500860	5.1173	1.55E-07	CKAP5	vte_hashimoto
ENSG00000134569	11	46878419	46940193	6	1500860	5.9607	1.2557E-09	LRP4	vte_hashimoto
ENSG00000149179	11	46958240	47185936	3	1500860	5.7603	4.1976E-09	C11orf49	vte_hashimoto
ENSG00000198324	12	111798455	111806925	1	1500860	6.4013	7.7019E-11	FAM109A	vte_hashimoto
ENSG00000111252	12	111843752	111889427	1	1500860	10.686	5.9014E-27	SH2B3	vte_hashimoto
ENSG00000204842	12	111890018	112037480	2	1500860	6.1094	5E-10	ATXN2	vte_hashimoto
ENSG00000111300	12	112464500	112546826	1	1500860	8.7899	7.4868E-19	NAA25	vte_hashimoto
ENSG00000173064	12	112597992	112819896	1	1500860	9.0156	9.7908E-20	HECTD4	vte_hashimoto
ENSG00000179295	12	112856155	112947717	2	1500860	6.1094	5E-10	PTPN11	vte_hashimoto

ENSG000000197943	16	81772702	81991899	1	1500860	5.4653	2.3105E-08	PLCG2	vte_hashimoto
ENSG00000070366	17	1963133	2207065	14	1500860	6.9416	1.9386E-12	SMG6	vte_hashimoto
ENSG000000129353	19	10713133	10755235	7	1500860	4.9358	3.9905E-07	SLC44A2	vte_hashimoto
ENSG00000078747	20	32951041	33099198	1	1500860	5.4087	3.175E-08	ITCH	vte_hashimoto
ENSG00000088298	20	33703167	33865928	5	1500860	4.6771	1.4551E-06	EDEM2	vte_hashimoto
ENSG000000101000	20	33759876	33765165	1	1500860	5.5278	1.6217E-08	PROCR	vte_hashimoto
ENSG000000143153	1	169074935	169101960	2	1500860	6.1094	5E-10	ATP1B1	vte_psoriasis
ENSG000000143156	1	169101769	169337205	2	1500860	6.1094	5E-10	NME7	vte_psoriasis
ENSG000000117477	1	169364108	169429907	1	1500860	9.5425	6.9688E-22	CCDC181	vte_psoriasis
ENSG000000198734	1	169483404	169555826	22	1500860	6.1094	5E-10	F5	vte_psoriasis
ENSG00000088926	4	187187099	187210835	1	1500860	5.9647	1.2257E-09	F11	vte_psoriasis
ENSG000000204540	6	31082527	31107869	24	1500860	7.7806	3.6082E-15	PSORS1C1	vte_psoriasis
ENSG000000204539	6	31082867	31088223	8	1500860	6.2656	1.8565E-10	CDSN	vte_psoriasis
ENSG000000204538	6	31105313	31107127	3	1500860	6.202	2.7876E-10	PSORS1C2	vte_psoriasis
ENSG000000234745	6	31321649	31324965	1	1500860	6.5205	3.5033E-11	HLA-B	vte_psoriasis
ENSG000000204516	6	31462658	31478901	2	1500860	6.1094	5E-10	MICB	vte_psoriasis
ENSG000000254870	6	31497996	31514385	2	1500860	6.1094	5E-10	ATP6V1G2-1	vte_psoriasis
ENSG000000232810	6	31543344	31546113	2	1500860	6.1094	5E-10	TNF	vte_psoriasis
ENSG000000204482	6	31553901	31556686	1	1500860	9.3307	5.258E-21	LST1	vte_psoriasis
ENSG000000204390	6	31777396	31783437	1	1500860	5.9745	1.1542E-09	HSPA1L	vte_psoriasis
ENSG000000204385	6	31830969	31846823	1	1500860	6.2348	2.2621E-10	SLC44A4	vte_psoriasis
ENSG000000244255	6	31895475	31919825	1	1500860	5.6811	6.6912E-09	CFB	vte_psoriasis
ENSG000000243649	6	31895475	31919861	1	1500860	5.6811	6.6912E-09	CFB	vte_psoriasis
ENSG000000204356	6	31919864	31926887	1	1500860	6.219	2.5011E-10	NELFE	vte_psoriasis
ENSG000000204344	6	31938868	31950598	1	1500860	5.7	5.9887E-09	STK19	vte_psoriasis
ENSG000000168477	6	32008931	32083111	6	1500860	7.1819	3.4373E-13	TNXB	vte_psoriasis
ENSG000000213676	6	32065953	32096030	3	1500860	6.2997	1.4914E-10	ATF6B	vte_psoriasis
ENSG000000198870	9	136243117	136271220	1	1500860	6.3393	1.1537E-10	C9orf96	vte_psoriasis
ENSG000000160323	9	136279478	136324508	1	1500860	5.5697	1.2761E-08	ADAMTS13	vte_psoriasis
ENSG000000134824	11	61560452	61634826	1	1500860	5.8376	2.6486E-09	FADS2	vte_psoriasis
ENSG000000111252	12	111843752	111889427	1	1500860	6.8858	2.8739E-12	SH2B3	vte_psoriasis
ENSG000000204842	12	111890018	112037480	2	1500860	5.2094	9.4738E-08	ATXN2	vte_psoriasis

ENSG00000099364	16	30934376	30960104	10	1500860	5.5872	1.1537E-08	FBXL19	vte_psoriasis
ENSG00000099381	16	30968615	30996437	9	1500860	4.1151	1.9348E-05	SETD1A	vte_psoriasis
ENSG00000099377	16	30996519	31000473	2	1500860	5.5819	1.1893E-08	HSD3B7	vte_psoriasis
ENSG00000099365	16	31000577	31021949	3	1500860	5.6837	6.591E-09	STX1B	vte_psoriasis
ENSG00000197943	16	81772702	81991899	1	1500860	5.7503	4.4543E-09	PLCG2	vte_psoriasis
ENSG00000070366	17	1963133	2207065	8	1500860	5.6819	6.6587E-09	SMG6	vte_psoriasis
ENSG00000129353	19	10713133	10755235	10	1500860	6.5488	2.8993E-11	SLC44A2	vte_psoriasis
ENSG00000129351	19	10764937	10803093	7	1500860	4.5347	2.8847E-06	ILF3	vte_psoriasis
ENSG00000213339	19	10812106	10824113	2	1500860	6.1094	5E-10	QTRT1	vte_psoriasis
ENSG00000079805	19	10828755	10944164	4	1500860	6.9188	2.277E-12	DNM2	vte_psoriasis
ENSG00000131069	20	33459949	33515769	1	1500860	5.6011	1.065E-08	ACSS2	vte_psoriasis
ENSG00000078814	20	33563206	33590240	2	1500860	5.5905	1.1323E-08	MYH7B	vte_psoriasis
ENSG00000100991	20	33590207	33680674	3	1500860	6.7649	6.6706E-12	TRPC4AP	vte_psoriasis
ENSG00000088298	20	33703167	33865928	8	1500860	6.7917	5.5413E-12	EDEM2	vte_psoriasis
ENSG00000101000	20	33759876	33765165	1	1500860	6.4613	5.1896E-11	PROCR	vte_psoriasis
ENSG00000159363	1	17312453	17338423	1	1500860	5.3636	4.0787E-08	ATP13A2	vte_ra
ENSG00000117118	1	17345217	17380665	1	1500860	6.0252	8.4445E-10	SDHB	vte_ra
ENSG00000159339	1	17634690	17690499	3	1500860	3.8075	7.0188E-05	PADI4	vte_ra
ENSG00000269468	1	17655507	17676070	1	1500860	5.4561	2.4332E-08	AC004824.2	vte_ra
ENSG00000081026	1	113933371	114228545	11	1500860	5.487	2.0446E-08	MAGI3	vte_ra
ENSG00000116793	1	114239453	114302111	4	1500860	5.6904	6.3379E-09	PHTF1	vte_ra
ENSG00000081019	1	114304454	114355098	6	1500860	5.9511	1.3318E-09	RSBN1	vte_ra
ENSG00000134242	1	114356433	114414381	8	1500860	6.3592	1.0142E-10	PTPN22	vte_ra
ENSG00000118292	1	150240600	150253327	1	1500860	5.6443	8.2922E-09	C1orf54	vte_ra
ENSG00000159208	1	150254953	150259505	1	1500860	5.6157	9.7862E-09	C1orf51	vte_ra
ENSG00000163125	1	150335567	150449042	2	1500860	4.2949	8.7396E-06	RPRD2	vte_ra
ENSG00000143369	1	150480538	150486265	1	1500860	5.3697	3.9427E-08	ECM1	vte_ra
ENSG00000160712	1	154377669	154441926	6	1500860	5.8408	2.5975E-09	IL6R	vte_ra
ENSG00000143226	1	161475220	161493803	2	1500860	6.1094	5E-10	FCGR2A	vte_ra
ENSG00000143156	1	169101769	169337205	1	1500860	8.4108	2.0363E-17	NME7	vte_ra
ENSG00000117477	1	169364108	169429907	1	1500860	8.5434	6.5183E-18	CCDC181	vte_ra
ENSG00000198734	1	169483404	169555826	5	1500860	7.0032	1.2513E-12	F5	vte_ra

ENSG00000198369	2	65537985	65659771	14	1500860	6.4421	5.8932E-11	SPRED2	vte_ra
ENSG00000144218	2	100162323	100759201	18	1500860	7.428	5.5123E-14	AFF3	vte_ra
ENSG00000138378	2	191894302	192016322	2	1500860	5.2817	6.3998E-08	STAT4	vte_ra
ENSG00000162944	2	198432948	198540769	8	1500860	5.6246	9.2982E-09	RFTN2	vte_ra
ENSG00000222017	2	198557830	198639547	9	1500860	4.7285	1.1307E-06	AC011997.1	vte_ra
ENSG00000152430	2	198591603	198651486	6	1500860	5.7045	5.8329E-09	BOLL	vte_ra
ENSG00000115896	2	198669426	199437305	24	1500860	5.6391	8.5471E-09	PLCL1	vte_ra
ENSG00000163599	2	204732509	204738683	1	1500860	5.3422	4.591E-08	CTLA4	vte_ra
ENSG00000196355	4	38628029	38666430	1	1500860	5.9411	1.4153E-09	AC021860.1	vte_ra
ENSG00000109787	4	38665817	38702663	1	1500860	5.4455	2.5826E-08	KLF3	vte_ra
ENSG00000171560	4	155504278	155511918	2	1500860	6.1094	5E-10	FGA	vte_ra
ENSG00000171557	4	155525286	155534119	2	1500860	6.1094	5E-10	FGG	vte_ra
ENSG00000145476	4	187112674	187134610	6	1500860	5.2617	7.1376E-08	CYP4V2	vte_ra
ENSG00000164344	4	187130133	187179625	4	1500860	5.7733	3.887E-09	KLKB1	vte_ra
ENSG00000088926	4	187187099	187210835	7	1500860	7.6431	1.0603E-14	F11	vte_ra
ENSG00000043143	5	133860003	133918918	3	1500860	5.7038	5.8599E-09	JADE2	vte_ra
ENSG00000187626	6	28212401	28227011	2	1500860	5.9918	1.0377E-09	ZKSCAN4	vte_ra
ENSG00000137338	6	28249314	28270326	3	1500860	6.1094	5E-10	PGBD1	vte_ra
ENSG00000204542	6	31079000	31080336	1	1500860	7.9129	1.2575E-15	C6orf15	vte_ra
ENSG00000204540	6	31082527	31107869	15	1500860	7.7259	5.5511E-15	PSORS1C1	vte_ra
ENSG00000204539	6	31082867	31088223	1	1500860	7.1442	4.5277E-13	CDSN	vte_ra
ENSG00000204538	6	31105313	31107127	2	1500860	5.5172	1.7221E-08	PSORS1C2	vte_ra
ENSG00000234745	6	31321649	31324965	1	1500860	5.7997	3.3216E-09	HLA-B	vte_ra
ENSG00000204516	6	31462658	31478901	2	1500860	6.1094	5E-10	MICB	vte_ra
ENSG00000254870	6	31497996	31514385	2	1500860	6.1094	5E-10	ATP6V1G2-l	vte_ra
ENSG00000232810	6	31543344	31546113	2	1500860	5.8343	2.7001E-09	TNF	vte_ra
ENSG00000204482	6	31553901	31556686	1	1500860	5.8072	3.1762E-09	LST1	vte_ra
ENSG00000204475	6	31556672	31560762	2	1500860	5.6455	8.2366E-09	NCR3	vte_ra
ENSG00000204410	6	31707725	31732622	3	1500860	6.3122	1.3753E-10	MSH5	vte_ra
ENSG00000255152	6	31707797	31732628	2	1500860	6.1094	5E-10	MSH5-SAPC	vte_ra
ENSG00000204390	6	31777396	31783437	2	1500860	6.1094	5E-10	HSPA1L	vte_ra
ENSG00000204385	6	31830969	31846823	12	1500860	7.6733	8.3822E-15	SLC44A4	vte_ra

ENSG00000204371	6	31847536	31865464	1	1500860	7.3986	6.8839E-14	EHMT2	vte_ra
ENSG00000166278	6	31865562	31913449	3	1500860	6.1094	5E-10	C2	vte_ra
ENSG00000244255	6	31895475	31919825	6	1500860	7.6203	1.2657E-14	CFB	vte_ra
ENSG00000243649	6	31895475	31919861	6	1500860	7.6203	1.2657E-14	CFB	vte_ra
ENSG00000204356	6	31919864	31926887	1	1500860	5.9366	1.455E-09	NELFE	vte_ra
ENSG00000204344	6	31938868	31950598	1	1500860	9.7825	6.6922E-23	STK19	vte_ra
ENSG00000168477	6	32008931	32083111	16	1500860	7.0647	8.0497E-13	TNXB	vte_ra
ENSG00000213676	6	32065953	32096030	7	1500860	7.845	2.1649E-15	ATF6B	vte_ra
ENSG00000196735	6	32595956	32614839	4	1500860	6.1094	5E-10	HLA-DQA1	vte_ra
ENSG00000179344	6	32627244	32636160	4	1500860	6.961	1.6898E-12	HLA-DQB1	vte_ra
ENSG00000241106	6	32780540	32784825	2	1500860	5.4364	2.7182E-08	HLA-DOB	vte_ra
ENSG00000250264	6	32781544	32806599	6	1500860	8.0766	3.3307E-16	TAP2	vte_ra
ENSG00000204267	6	32789610	32806557	4	1500860	6.8323	4.1795E-12	TAP2	vte_ra
ENSG00000204264	6	32808494	32812480	1	1500860	5.354	4.3025E-08	PSMB8	vte_ra
ENSG00000240065	6	32811913	32827362	1	1500860	5.5312	1.5906E-08	PSMB9	vte_ra
ENSG00000168394	6	32812986	32821755	1	1500860	5.5312	1.5906E-08	TAP1	vte_ra
ENSG00000248993	6	32905141	32920899	1	1500860	6.6453	1.5132E-11	XXbac-BPG	vte_ra
ENSG00000204252	6	32971955	32977389	3	1500860	6.1094	5E-10	HLA-DOA	vte_ra
ENSG00000204248	6	33130458	33160276	1	1500860	5.6741	6.9699E-09	COL11A2	vte_ra
ENSG00000204231	6	33161365	33168630	1	1500860	5.7588	4.2355E-09	RXRb	vte_ra
ENSG00000231925	6	33267471	33282164	1	1500860	6.2152	2.5623E-10	TAPBP	vte_ra
ENSG00000153814	7	27870192	28220362	6	1500860	6.1094	5E-10	JAZF1	vte_ra
ENSG00000105810	7	92234235	92465908	17	1500860	7.2122	2.7528E-13	CDK6	vte_ra
ENSG00000136573	8	11351510	11422113	2	1500860	5.5644	1.3152E-08	BLK	vte_ra
ENSG00000171102	9	136080664	136084630	1	1500860	6.3409	1.1423E-10	OBP2B	vte_ra
ENSG00000198870	9	136243117	136271220	1	1500860	7.7046	6.5604E-15	C9orf96	vte_ra
ENSG00000160323	9	136279478	136324508	1	1500860	9.8939	2.2131E-23	ADAMTS13	vte_ra
ENSG00000160325	9	136325089	136335970	1	1500860	9.9134	1.8208E-23	CACFD1	vte_ra
ENSG00000160326	9	136336217	136344259	1	1500860	5.8348	2.6927E-09	SLC2A6	vte_ra
ENSG00000078403	10	21823094	22032559	1	1500860	5.3906	3.5105E-08	MLLT10	vte_ra
ENSG00000150347	10	63661059	63856703	1	1500860	6.3865	8.4846E-11	ARID5B	vte_ra
ENSG00000175224	11	46638826	46696368	1	1500860	5.3661	4.0219E-08	ATG13	vte_ra

ENSG00000175213	11	46722368	46727462	2	1500860	6.1364	4.2194E-10	ZNF408	vte_ra
ENSG00000175216	11	46764598	46867847	1	1500860	5.4681	2.2741E-08	CKAP5	vte_ra
ENSG00000134569	11	46878419	46940193	1	1500860	5.4179	3.0147E-08	LRP4	vte_ra
ENSG00000124920	11	61520114	61555990	4	1500860	4.6591	1.5876E-06	MYRF	vte_ra
ENSG00000134825	11	61535973	61560274	6	1500860	6.271	1.794E-10	TMEM258	vte_ra
ENSG00000168496	11	61560109	61564716	1	1500860	5.8142	3.0456E-09	FEN1	vte_ra
ENSG00000134824	11	61560452	61634826	14	1500860	5.7641	4.1039E-09	FADS2	vte_ra
ENSG00000149485	11	61567099	61596790	8	1500860	6.8361	4.0703E-12	FADS1	vte_ra
ENSG00000221968	11	61640991	61659523	1	1500860	5.4557	2.4391E-08	FADS3	vte_ra
ENSG00000111252	12	111843752	111889427	2	1500860	6.1094	5E-10	SH2B3	vte_ra
ENSG00000204842	12	111890018	112037480	2	1500860	6.1094	5E-10	ATXN2	vte_ra
ENSG00000111300	12	112464500	112546826	1	1500860	6.5476	2.923E-11	NAA25	vte_ra
ENSG00000173064	12	112597992	112819896	1	1500860	6.7478	7.5048E-12	HECTD4	vte_ra
ENSG00000179295	12	112856155	112947717	2	1500860	4.8077	7.6354E-07	PTPN11	vte_ra
ENSG00000172575	15	38780304	38857776	9	1500860	5.7156	5.4645E-09	RASGRP1	vte_ra
ENSG00000166949	15	67356101	67487533	1	1500860	5.341	4.6208E-08	SMAD3	vte_ra
ENSG00000140575	15	90931450	91045475	6	1500860	4.4511	4.2725E-06	IQGAP1	vte_ra
ENSG00000156860	16	30669752	30682135	2	1500860	4.2284	1.1767E-05	FBR5	vte_ra
ENSG00000080603	16	30709530	30755602	3	1500860	4.3136	8.0294E-06	SRCAP	vte_ra
ENSG00000103549	16	30773066	30787628	1	1500860	5.802	3.2771E-09	RNF40	vte_ra
ENSG00000099385	16	30844947	30906281	7	1500860	5.9895	1.0522E-09	BCL7C	vte_ra
ENSG00000153774	16	75327596	75467383	14	1500860	5.2731	6.7087E-08	CFDP1	vte_ra
ENSG00000261717	16	75446582	75498604	6	1500860	6.4245	6.6153E-11	RP11-77K12	vte_ra
ENSG00000166822	16	75476952	75499395	4	1500860	6.1929	2.9538E-10	TMEM170A	vte_ra
ENSG00000183196	16	75510949	75529282	1	1500860	5.4131	3.0963E-08	CHST6	vte_ra
ENSG00000129347	19	10663761	10676713	1	1500860	5.9515	1.3285E-09	KRI1	vte_ra
ENSG00000129353	19	10713133	10755235	14	1500860	7.845	2.1649E-15	SLC44A2	vte_ra
ENSG00000129351	19	10764937	10803093	9	1500860	6.9684	1.6024E-12	ILF3	vte_ra
ENSG00000079805	19	10828755	10944164	1	1500860	6.9606	1.6937E-12	DNM2	vte_ra
ENSG00000198646	20	33284722	33413452	6	1500860	5.9031	1.784E-09	NCOA6	vte_ra
ENSG00000131067	20	33432523	33460663	1	1500860	7.5703	1.8617E-14	GGT7	vte_ra
ENSG00000131069	20	33459949	33515769	18	1500860	6.1094	5E-10	ACSS2	vte_ra

ENSG000000100983	20	33516236	33543620	5	1500860	6.3733	9.2499E-11	GSS	vte_ra
ENSG00000078814	20	33563206	33590240	10	1500860	7.7451	4.774E-15	MYH7B	vte_ra
ENSG000000100991	20	33590207	33680674	12	1500860	6.8255	4.3821E-12	TRPC4AP	vte_ra
ENSG00000088298	20	33703167	33865928	21	1500860	7.2702	1.7952E-13	EDEM2	vte_ra
ENSG000000101000	20	33759876	33765165	1	1500860	6.6819	1.179E-11	PROCR	vte_ra
ENSG000000125966	20	33814457	33864801	2	1500860	5.1889	1.0574E-07	MMP24	vte_ra
ENSG000000143226	1	161475220	161493803	1	1500860	6.8407	3.9414E-12	FCGR2A	vte_sle
ENSG000000143156	1	169101769	169337205	1	1500860	5.9367	1.4538E-09	NME7	vte_sle
ENSG000000138378	2	191894302	192016322	12	1500860	7.9284	1.1102E-15	STAT4	vte_sle
ENSG000000171560	4	155504278	155511918	1	1500860	7.7026	6.668E-15	FGA	vte_sle
ENSG000000171557	4	155525286	155534119	1	1500860	7.3914	7.2629E-14	FGG	vte_sle
ENSG000000145476	4	187112674	187134610	8	1500860	5.9115	1.6951E-09	CYP4V2	vte_sle
ENSG000000164344	4	187130133	187179625	9	1500860	5.1081	1.6271E-07	KLKB1	vte_sle
ENSG00000088926	4	187187099	187210835	4	1500860	6.7973	5.3298E-12	F11	vte_sle
ENSG000000204540	6	31082527	31107869	3	1500860	5.4141	3.0799E-08	PSORS1C1	vte_sle
ENSG000000179344	6	32627244	32636160	1	1500860	5.8737	2.1314E-09	HLA-DQB1	vte_sle
ENSG000000196821	6	34555065	34664636	11	1500860	6.7807	5.9784E-12	C6orf106	vte_sle
ENSG000000124562	6	34725183	34741571	1	1500860	6.6895	1.1195E-11	SNRPC	vte_sle
ENSG00000065060	6	34759857	34850915	11	1500860	7.0069	1.2179E-12	UHRF1BP1	vte_sle
ENSG000000128604	7	128577666	128590089	1	1500860	5.6624	7.465E-09	IRF5	vte_sle
ENSG000000136573	8	11351510	11422113	8	1500860	6.0771	6.1205E-10	BLK	vte_sle
ENSG000000134569	11	46878419	46940193	2	1500860	5.3521	4.3481E-08	LRP4	vte_sle
ENSG000000134825	11	61535973	61560274	1	1500860	5.6786	6.7911E-09	TMEM258	vte_sle
ENSG000000134824	11	61560452	61634826	3	1500860	5.5225	1.6714E-08	FADS2	vte_sle
ENSG000000149485	11	61567099	61596790	3	1500860	5.5225	1.6714E-08	FADS1	vte_sle
ENSG000000110799	12	6058040	6233936	1	1500860	5.3295	4.9233E-08	VWF	vte_sle
ENSG00000099385	16	30844947	30906281	1	1500860	5.5376	1.5331E-08	BCL7C	vte_sle
ENSG00000099364	16	30934376	30960104	8	1500860	4.3104	8.1489E-06	FBXL19	vte_sle
ENSG00000099381	16	30968615	30996437	9	1500860	4.3783	5.9816E-06	SETD1A	vte_sle
ENSG00000099377	16	30996519	31000473	2	1500860	5.8685	2.1988E-09	HSD3B7	vte_sle
ENSG00000099365	16	31000577	31021949	2	1500860	5.0652	2.0398E-07	STX1B	vte_sle
ENSG000000169896	16	31271311	31344213	1	1500860	5.3868	3.5854E-08	ITGAM	vte_sle

ENSG00000129353	19	10713133	10755235	4	1500860	5.3248	5.0523E-08	SLC44A2	vte_sle
ENSG00000161179	22	21982378	21984353	2	1500860	5.2818	6.3951E-08	YDJC	vte_sle
ENSG00000128274	22	43088127	43117304	1	1500860	6.0392	7.7428E-10	A4GALT	vte_sle
ENSG00000160685	1	154975127	154990998	1	1500860	5.3774	3.7795E-08	ZBTB7B	vte_ss
ENSG00000143153	1	169074935	169101960	8	1500860	6.4997	4.0249E-11	ATP1B1	vte_ss
ENSG00000143156	1	169101769	169337205	1	1500860	5.6736	6.9904E-09	NME7	vte_ss
ENSG00000198734	1	169483404	169555826	1	1500860	6.494	4.1807E-11	F5	vte_ss
ENSG00000145476	4	187112674	187134610	4	1500860	6.248	2.0789E-10	CYP4V2	vte_ss
ENSG00000164344	4	187130133	187179625	9	1500860	6.1094	5E-10	KLKB1	vte_ss
ENSG00000088926	4	187187099	187210835	5	1500860	6.3534	1.0531E-10	F11	vte_ss
ENSG00000079691	6	25279306	25620758	3	1500860	4.1691	1.5287E-05	LRRRC16A	vte_ss
ENSG00000146039	6	25754927	25781419	3	1500860	5.4173	3.0245E-08	SLC17A4	vte_ss
ENSG00000124568	6	25783125	25832287	1	1500860	5.58	1.2028E-08	SLC17A1	vte_ss
ENSG00000124564	6	25833294	25882514	1	1500860	5.8044	3.2298E-09	SLC17A3	vte_ss
ENSG00000112337	6	25912982	25930946	2	1500860	5.0146	2.6578E-07	SLC17A2	vte_ss
ENSG00000112343	6	25963030	25987384	3	1500860	5.8243	2.8668E-09	TRIM38	vte_ss
ENSG00000124610	6	26017260	26018040	1	1500860	5.6085	1.0205E-08	HIST1H1A	vte_ss
ENSG00000010704	6	26087509	26098571	1	1500860	5.3322	4.8515E-08	HFE	vte_ss
ENSG00000198315	6	28109688	28127250	1	1500860	5.3862	3.599E-08	ZKSCAN8	vte_ss
ENSG00000137338	6	28249314	28270326	1	1500860	5.5703	1.2718E-08	PGBD1	vte_ss
ENSG00000235109	6	28292470	28324048	2	1500860	6.1094	5E-10	ZSCAN31	vte_ss
ENSG00000189298	6	28317691	28336947	2	1500860	6.1094	5E-10	ZKSCAN3	vte_ss
ENSG00000158691	6	28346732	28367511	2	1500860	5.6135	9.9149E-09	ZSCAN12	vte_ss
ENSG00000187987	6	28399707	28411279	1	1500860	5.7705	3.9509E-09	ZSCAN23	vte_ss
ENSG00000204644	6	29640169	29648887	4	1500860	4.5016	3.3726E-06	ZFP57	vte_ss
ENSG00000204540	6	31082527	31107869	4	1500860	6.6704	1.2755E-11	PSORS1C1	vte_ss
ENSG00000204539	6	31082867	31088223	2	1500860	6.1094	5E-10	CDSN	vte_ss
ENSG00000213760	6	31512239	31516204	1	1500860	5.5423	1.4929E-08	ATP6V1G2	vte_ss
ENSG00000204498	6	31514647	31526606	1	1500860	5.5423	1.4929E-08	NFKBIL1	vte_ss
ENSG00000226979	6	31539831	31542101	2	1500860	5.6197	9.5664E-09	LTA	vte_ss
ENSG00000204385	6	31830969	31846823	8	1500860	4.7924	8.2387E-07	SLC44A4	vte_ss
ENSG00000204371	6	31847536	31865464	1	1500860	7.2879	1.5744E-13	EHMT2	vte_ss

ENSG00000244255	6	31895475	31919825	2	1500860	5.6178	9.67E-09	CFB	vte_ss
ENSG00000243649	6	31895475	31919861	2	1500860	5.6178	9.67E-09	CFB	vte_ss
ENSG00000204344	6	31938868	31950598	1	1500860	10.095	2.893E-24	STK19	vte_ss
ENSG00000196735	6	32595956	32614839	2	1500860	6.1094	5E-10	HLA-DQA1	vte_ss
ENSG00000179344	6	32627244	32636160	1	1500860	7.4734	3.9073E-14	HLA-DQB1	vte_ss
ENSG00000240065	6	32811913	32827362	2	1500860	5.2365	8.1846E-08	PSMB9	vte_ss
ENSG00000168394	6	32812986	32821755	2	1500860	5.2365	8.1846E-08	TAP1	vte_ss
ENSG00000160271	9	135973107	136039301	2	1500860	4.6309	1.8204E-06	RALGDS	vte_ss
ENSG00000148288	9	136028340	136039332	2	1500860	4.6309	1.8204E-06	GBGT1	vte_ss
ENSG00000148296	9	136197552	136203235	1	1500860	5.7122	5.5757E-09	SURF6	vte_ss
ENSG00000148290	9	136218610	136223552	1	1500860	5.3438	4.5514E-08	SURF1	vte_ss
ENSG00000198870	9	136243117	136271220	1	1500860	7.9362	1.0421E-15	C9orf96	vte_ss
ENSG00000160323	9	136279478	136324508	1	1500860	7.2055	2.8908E-13	ADAMTS13	vte_ss
ENSG00000160325	9	136325089	136335970	1	1500860	7.1158	5.5631E-13	CACFD1	vte_ss
ENSG00000160326	9	136336217	136344259	1	1500860	6.2404	2.1818E-10	SLC2A6	vte_ss
ENSG00000149179	11	46958240	47185936	6	1500860	4.2126	1.2624E-05	C11orf49	vte_ss
ENSG00000099385	16	30844947	30906281	4	1500860	5.6205	9.5216E-09	BCL7C	vte_ss
ENSG00000225190	17	43513266	43568115	2	1500860	5.4975	1.9264E-08	PLEKHM1	vte_ss
ENSG00000127616	19	11071598	11176071	3	1500860	4.3083	8.224E-06	SMARCA4	vte_ss
ENSG00000088298	20	33703167	33865928	2	1500860	6.0312	8.1383E-10	EDEM2	vte_ss

Table S3: Heterogeneity Tests

Exposure trait	MR-Egger			IVW		
	Cochran's Q	I ² (%)	p-value	Cochran's Q	I ² (%)	p-value
SLE	1.93E+02	4.56E+01	3.69E-07	1.95E+02	4.55E+01	3.43E-07
RA	5.26E+02	6.20E+01	3.70E-31	5.69E+02	6.47E+01	6.69E-37
HT	1.51E+02	5.50E+01	2.92×10-8	1.51E+02	5.43E+01	4.41×10-8
SS	2.60E+01	1.86E+01	2.14E-01	3.20E+01	3.10E+01	7.92E-02
psoriasis	1.63E+02	6.63E+01	1.20E-12	1.74E+02	6.79E+01	4.93E-14

Abbreviations: IVW, inverse-variance weighted; MR, Mendelian randomization; VTE, venous thromboembolism; SLE, systemic lupus erythematosus; RA, rheumatoid arthritis; HT, Hashimoto's thyroiditis; SS, Sjögren's syndrome

Supplementary Figure Legends

Supplementary Figure 1. Manhattan plots from the PLACO analysis across the Autoimmune–Thrombotic Axis. The blue line indicates the suggestive significance threshold (1×10^{-5}), and the red line indicates the genome-wide significance threshold (5×10^{-8}). (A) VTE & RA; (B) VTE & SLE; (C) VTE & SS; (D) VTE & psoriasis; (E) VTE & HT. Abbreviations: HT, Hashimoto's thyroiditis; PLACO, pleiotropy analysis and cross-phenotype analysis; RA, rheumatoid arthritis; SLE, systemic lupus erythematosus; SS, Sjögren's syndrome; VTE, venous thromboembolism.

Supplementary Figure 2. Manhattan plots from the CPASSOC analysis across the Autoimmune–Thrombotic Axis. The blue line indicates the suggestive significance threshold (1×10^{-5}), and the red line indicates the genome-wide significance threshold (5×10^{-8}). (A) VTE & RA; (B) VTE & SLE; (C) VTE & SS; (D) VTE & psoriasis; (E) VTE & HT. Abbreviations: CPASSOC, Cross-Phenotype Association Analysis; HT, Hashimoto's thyroiditis; RA, rheumatoid arthritis; SLE, systemic lupus erythematosus; SS, Sjögren's syndrome; VTE, venous thromboembolism.

Supplementary Figure 3. Regional association plots of ISLs between AD and VTE. (A–E) ISLs for RA and VTE located at 1q21.3, 2q11.2, 4p14, 7p15.1, and 7p21.2, respectively. (F) An ISL for HT and VTE at chr12q24.12–q24.13. All loci shown satisfy $PP.H4 > 0.9$, indicating strong evidence for a shared causal variant. Abbreviations: HT, Hashimoto's thyroiditis; ISLs, Immunothrombotic Shared Loci; PP.H4, posterior probability for hypothesis 4 (colocalization); RA, rheumatoid arthritis; VTE, venous thromboembolism.

Supplementary Figure 4. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in whole blood tissue (GTEx). Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 5. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in whole blood tissue (eQTLgen). Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 6. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in thyroid tissue. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 7. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in spleen tissue. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 8. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in sun exposed (lower leg) skin. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 9. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in sun unexposed (suprapubic) skin. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 10. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in skeletal muscle. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 11. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in EBV-transformed lymphocytes. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 12. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in cultured fibroblasts. Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 13. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in artery (aorta). Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 14. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in artery (coronary). Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 15. Colocalization analysis across the Autoimmune–Thrombotic Axis: AD or VTE and eQTL of pleiotropic genes in artery (tibial). Abbreviations: AD, autoimmune disease; eQTL, expression quantitative trait locus; VTE, venous thromboembolism.

Supplementary Figure 16. Colocalization analysis of IL6R multi-tissue eQTL with traits across the Autoimmune–Thrombotic Axis. (A) Cells (EBV-transformed lymphocytes) eQTL with RA; (B) Artery–Aorta eQTL with RA; (C) Artery–Tibial eQTL with RA; (D) Artery–Coronary eQTL with RA; (E) Artery–Aorta eQTL with VTE. Abbreviations: eQTL, expression quantitative trait locus; RA, rheumatoid arthritis; VTE, venous thromboembolism.

Supplementary Figure 17. Colocalization analysis of PLCL1 multi-tissue eQTL with traits across the Autoimmune–Thrombotic Axis. (A) Spleen eQTL with RA; (B) Artery–Coronary eQTL with RA; (C) Whole Blood (eQTLGen) eQTL with RA; (D) Artery–Tibial eQTL with VTE; (E) Thyroid eQTL with VTE. Abbreviations: eQTL, expression quantitative trait locus; RA, rheumatoid arthritis; VTE, venous thromboembolism.

Supplementary Figure 18. Linkage Disequilibrium Heatmaps of the IL6R (A) and PLCL1 (B) Loci from Multi-Tissue eQTL Colocalization Analysis. The color scale represents the degree of linkage disequilibrium (r^2) between SNPs, with red indicating high r^2 (strong LD) and blue indicating low r^2 (weak LD). Abbreviations: LD, linkage disequilibrium.

Supplementary Figure 19. SMR analysis across the Autoimmune–Thrombotic Axis: VTE and eQTL from multiple tissues. (A) Aorta Artery eQTL from GTEx and VTE; (B) Coronary Artery eQTL from GTEx and VTE; (C) Tibial Artery eQTL from GTEx and VTE; (D) Skeletal Muscle eQTL from GTEx and VTE; (E) EBV-transformed lymphocytes eQTL from GTEx and VTE; (F) Spleen eQTL from GTEx and VTE; (G) Whole Blood eQTL from GTEx and VTE; (H) Whole Blood eQTL from eQTLGen and VTE. Abbreviations: eQTL, expression quantitative trait locus; GTEx, Genotype-Tissue Expression project; SMR, summary-based Mendelian randomization; VTE, venous thromboembolism.

Supplementary Figure 20. SMR analysis across the Autoimmune–Thrombotic Axis: RA and eQTL from multiple tissues. (A) Aorta Artery eQTL from GTEx and RA; (B) Coronary Artery eQTL from GTEx and RA; (C) Tibial Artery eQTL from GTEx and RA; (D) Skeletal Muscle eQTL from GTEx and RA; (E) EBV-transformed lymphocytes eQTL from GTEx and RA; (F) Spleen eQTL from GTEx and RA; (G) Whole Blood eQTL from GTEx and RA; (H) Whole Blood eQTL from eQTLGen and RA. Abbreviations: eQTL, expression quantitative trait locus; GTEx, Genotype-Tissue Expression project; RA, rheumatoid arthritis; SMR, summary-based Mendelian randomization.

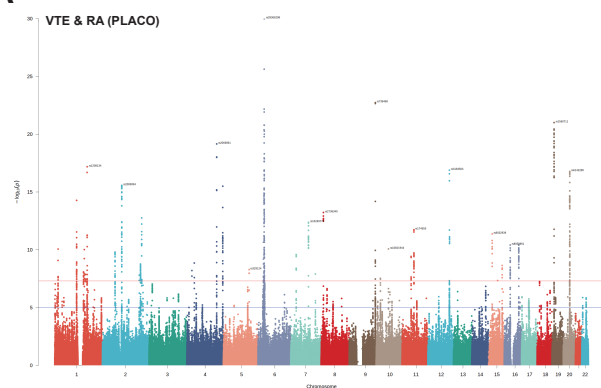
Supplementary Figure 21. SMR analysis across the Autoimmune–Thrombotic Axis: SLE and eQTL from multiple tissues. (A) Aorta Artery eQTL from GTEx and SLE; (B) Coronary Artery eQTL from GTEx and SLE; (C) Tibial Artery eQTL from GTEx and SLE; (D) Skeletal Muscle eQTL from GTEx and SLE; (E) EBV-transformed lymphocytes eQTL from GTEx and SLE; (F) Spleen eQTL from GTEx and SLE; (G) Whole Blood eQTL from GTEx and SLE; (H) Whole Blood eQTL from eQTLGen and SLE. Abbreviations: eQTL, expression quantitative trait locus; GTEx, Genotype-Tissue Expression project; SLE, systemic lupus erythematosus; SMR, summary-based Mendelian randomization.

Supplementary Figure 22. SMR analysis across the Autoimmune–Thrombotic Axis: SS and eQTL from multiple tissues. (A) Aorta Artery eQTL from GTEx and SS; (B) Coronary Artery eQTL from GTEx and SS; (C) Tibial Artery eQTL from GTEx and SS; (D) Skeletal Muscle eQTL from GTEx and SS; (E) EBV-transformed lymphocytes eQTL from GTEx and SS; (F) Spleen eQTL from GTEx and SS; (G) Whole Blood eQTL from GTEx and SS; (H) Whole Blood eQTL from eQTLGen and SS. Abbreviations: eQTL, expression quantitative trait locus; GTEx, Genotype-Tissue Expression project; SMR, summary-based Mendelian randomization; SS, Sjögren's syndrome.

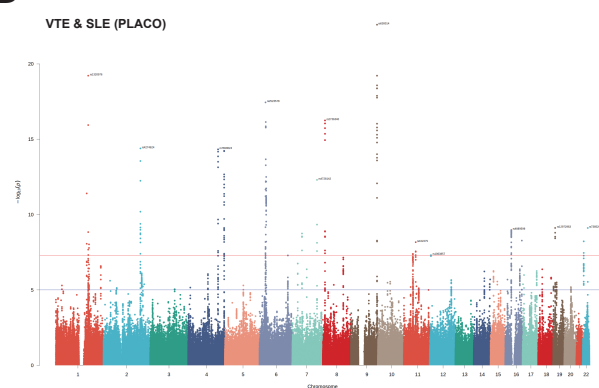
Supplementary Figure 23. SMR analysis across the Autoimmune–Thrombotic Axis: psoriasis and eQTL from multiple tissues. (A) Aorta Artery eQTL from GTEx and psoriasis; (B) Coronary Artery eQTL from GTEx and psoriasis; (C) Tibial Artery eQTL from GTEx and psoriasis; (D) Skeletal Muscle eQTL from GTEx and psoriasis; (E) EBV-transformed lymphocytes eQTL from GTEx and psoriasis; (F) Spleen eQTL from GTEx and psoriasis; (G) Whole Blood eQTL from GTEx and psoriasis; (H) Whole Blood eQTL from eQTLGen and psoriasis. Abbreviations: eQTL, expression quantitative trait locus; GTEx, Genotype-Tissue Expression project; SMR, summary-based Mendelian randomization.

Supplementary Figure 24. SMR analysis across the Autoimmune–Thrombotic Axis: HT and eQTL from multiple tissues. (A) Aorta Artery eQTL from GTEx and HT; (B) Coronary Artery eQTL from GTEx and HT; (C) Tibial Artery eQTL from GTEx and HT; (D) Skeletal Muscle eQTL from GTEx and HT; (E) EBV-transformed lymphocytes eQTL from GTEx and HT; (F) Spleen eQTL from GTEx and HT; (G) Whole Blood eQTL from GTEx and HT; (H) Whole Blood eQTL from eQTLGen and HT. Abbreviations: eQTL, expression quantitative trait locus; GTEx, Genotype-Tissue Expression project; HT, Hashimoto's thyroiditis; SMR, summary-based Mendelian randomization.

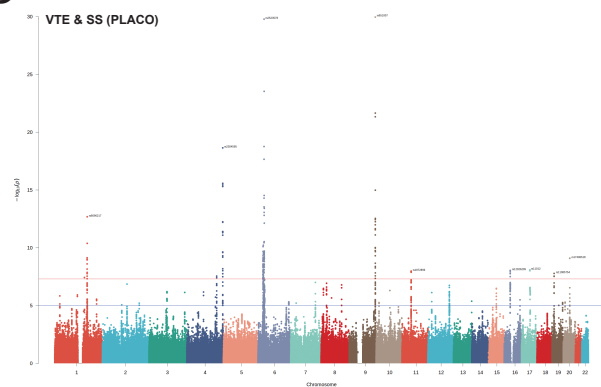
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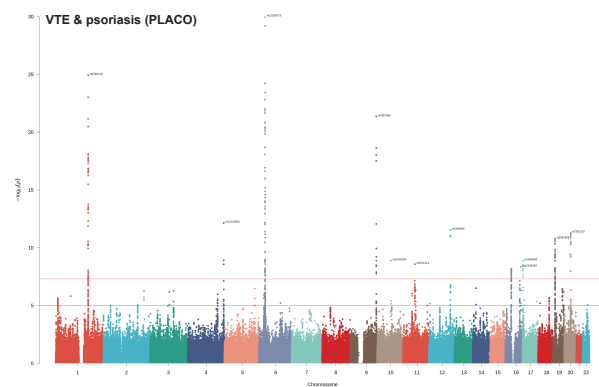
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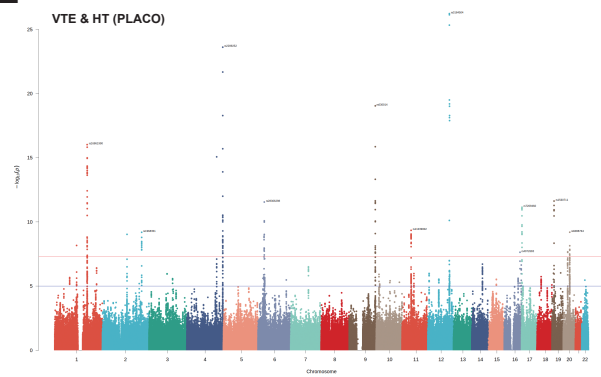
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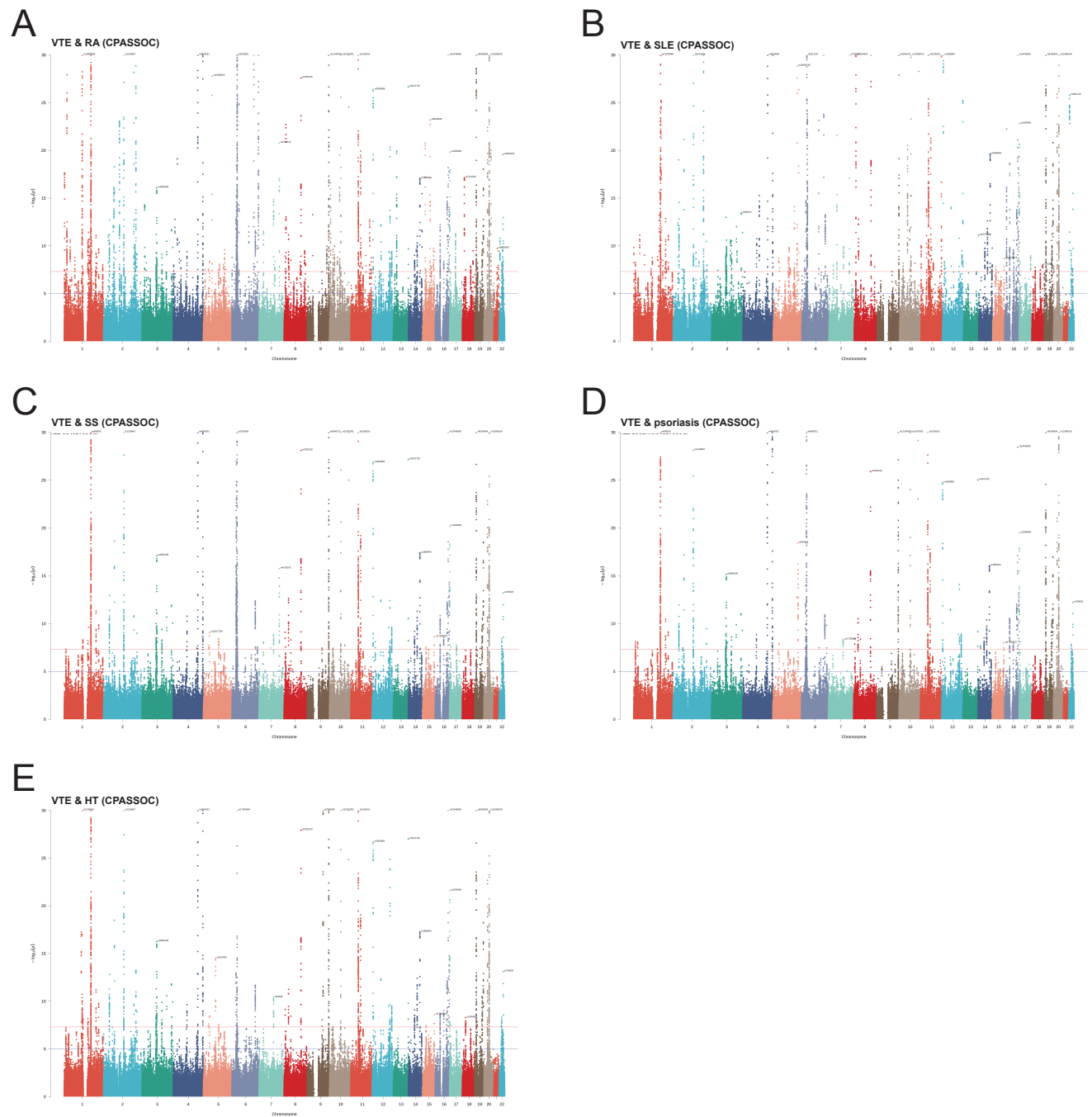


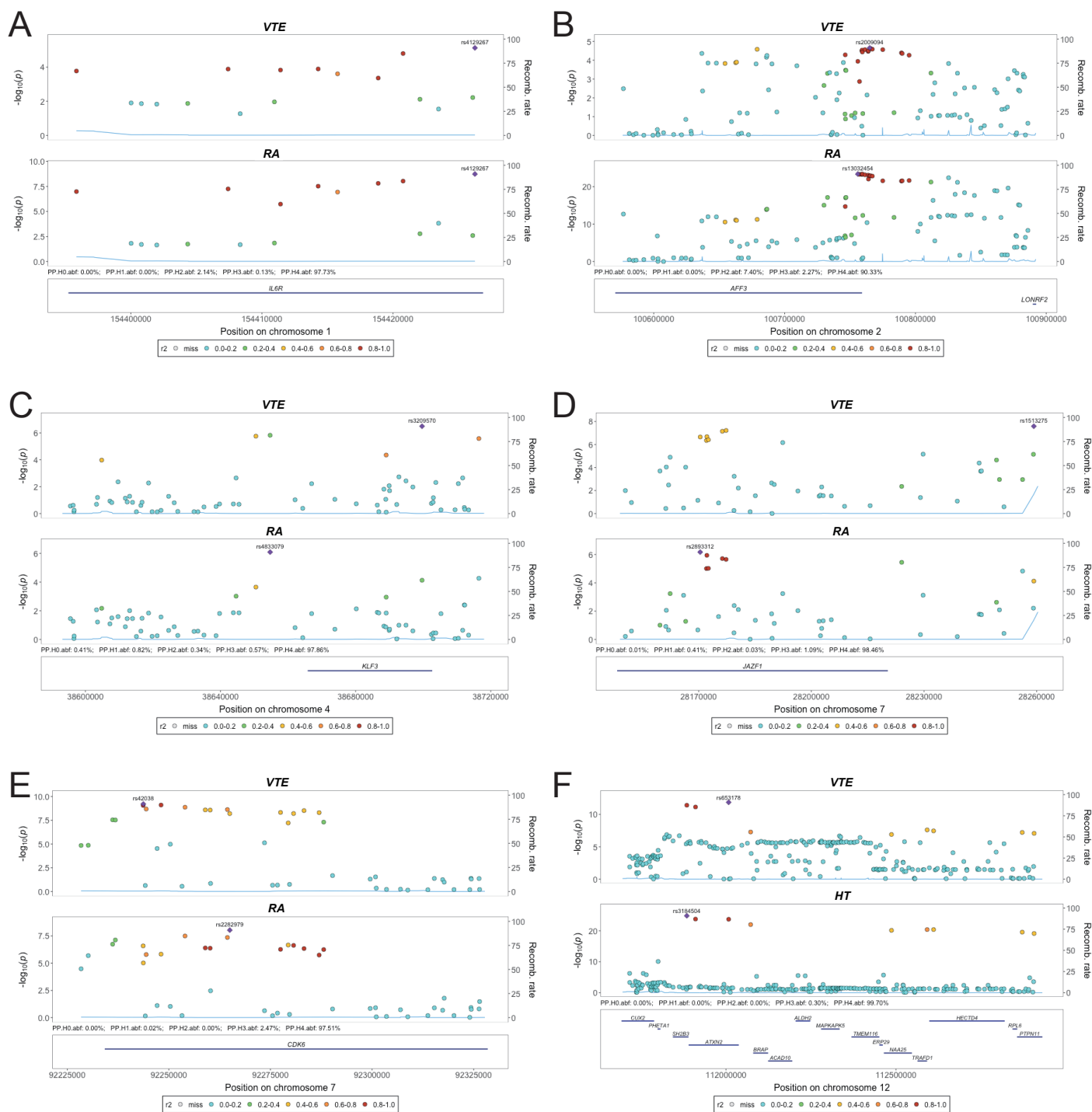
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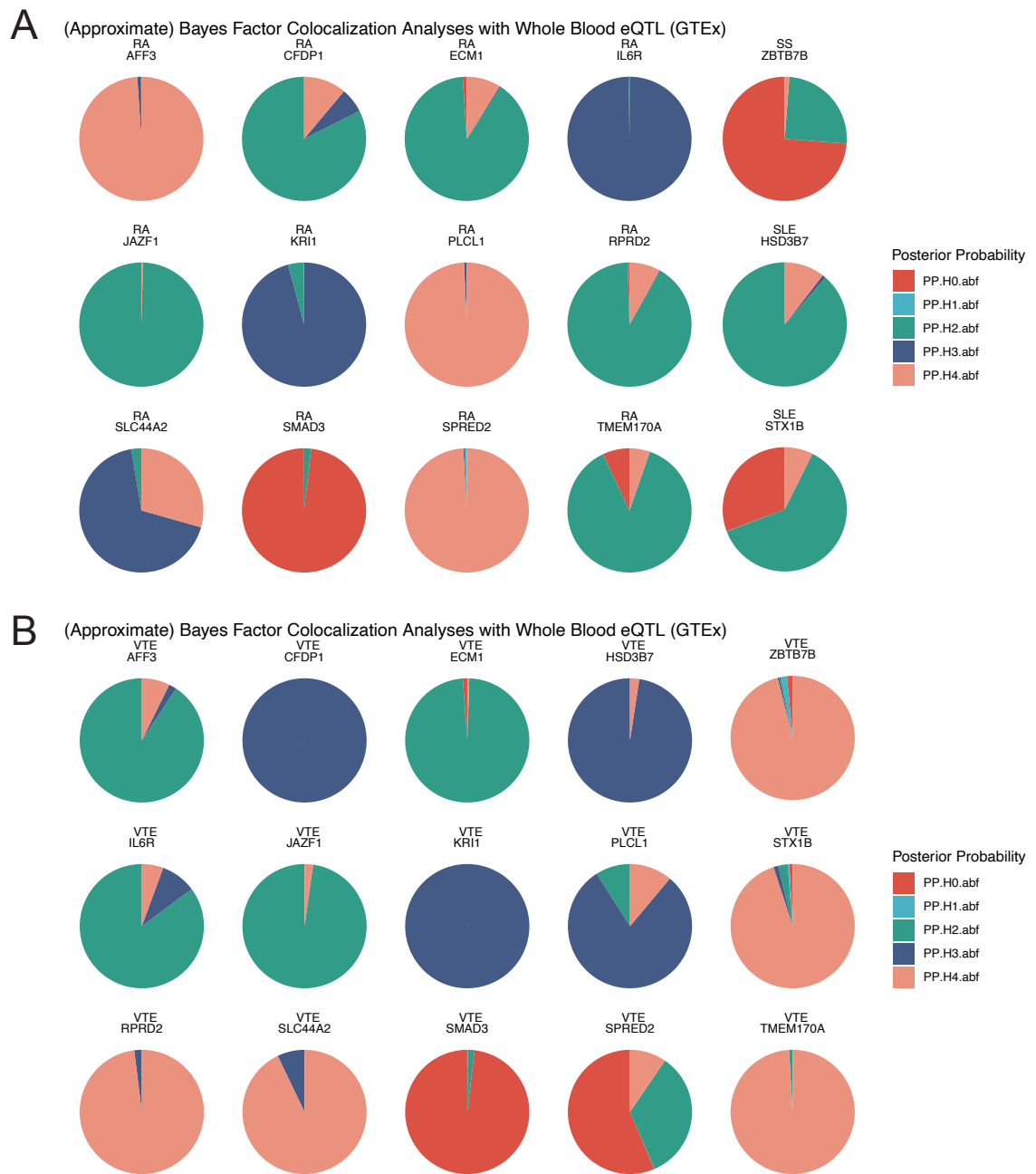
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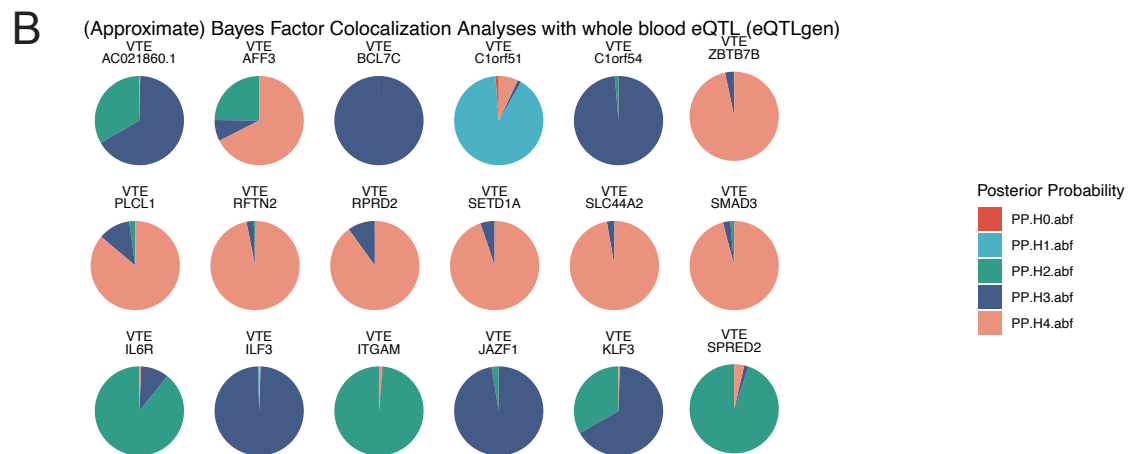
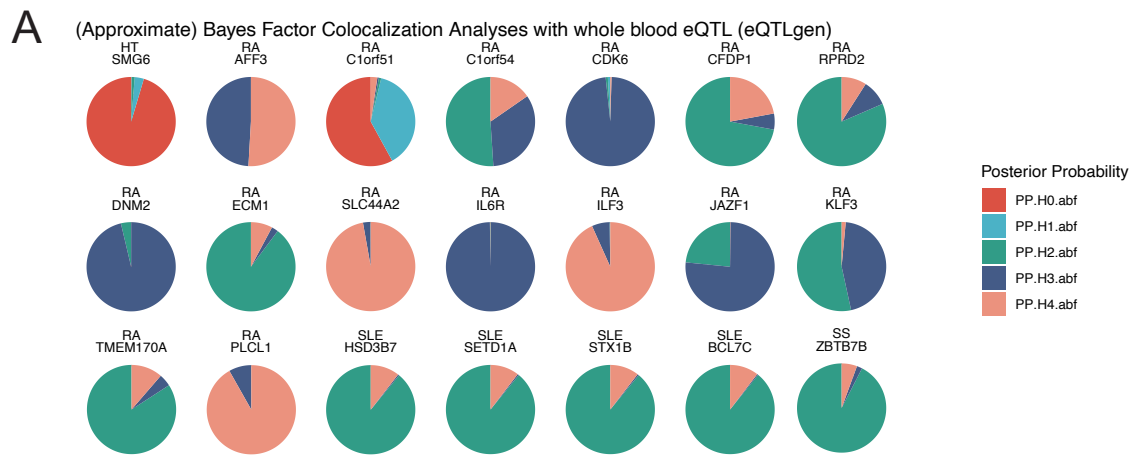






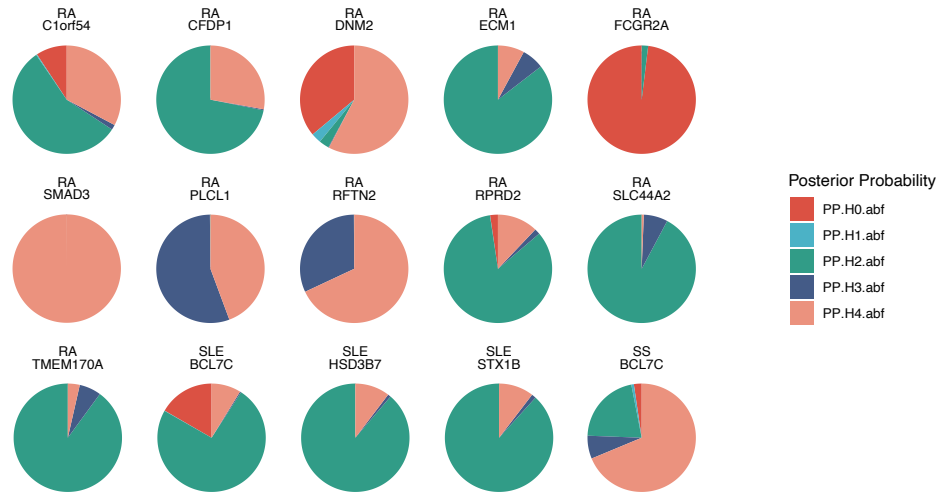
Supplementary Figure 3





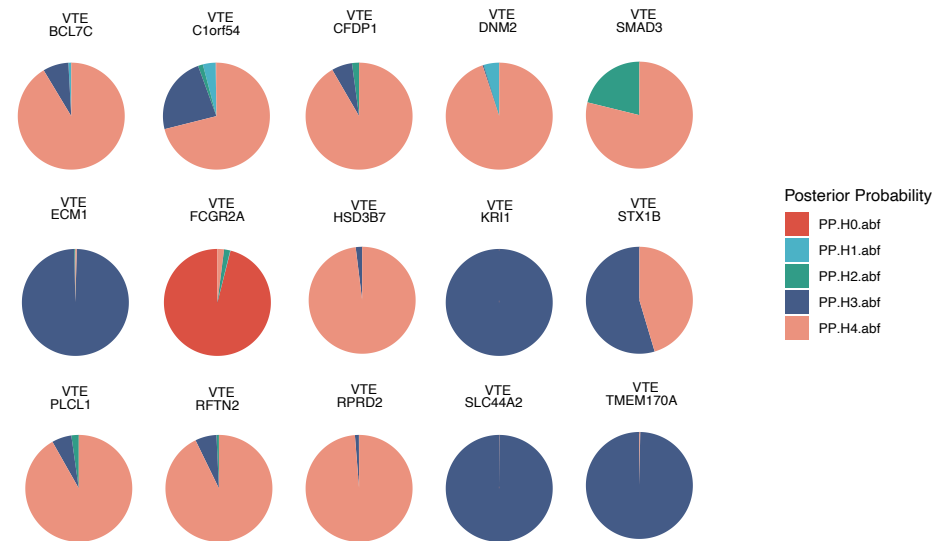
A

(Approximate) Bayes Factor Colocalization Analyses with Thyroid eQTL



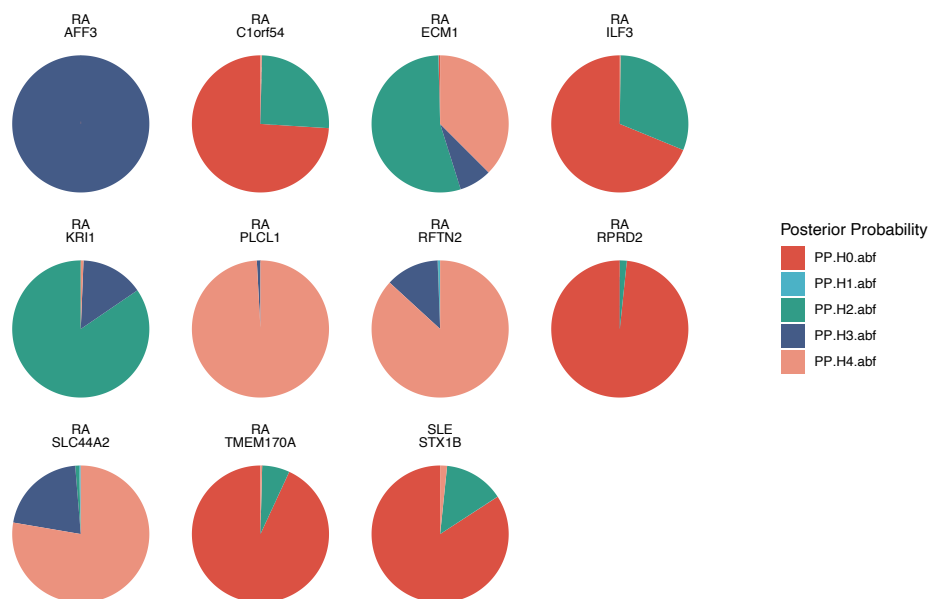
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(Approximate) Bayes Factor Colocalization Analyses with Thyroid eQTL



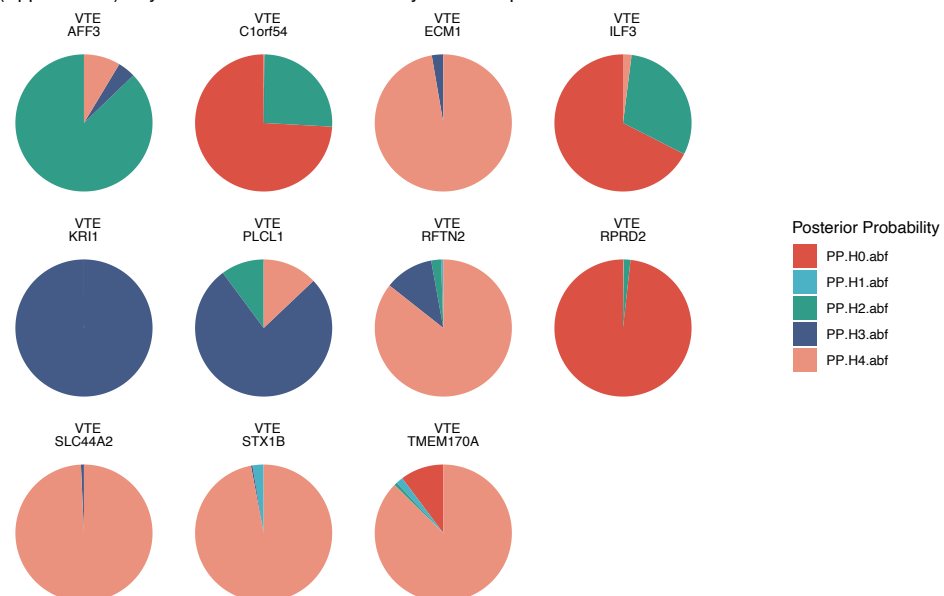
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(Approximate) Bayes Factor Colocalization Analyses with Spleen eQTL

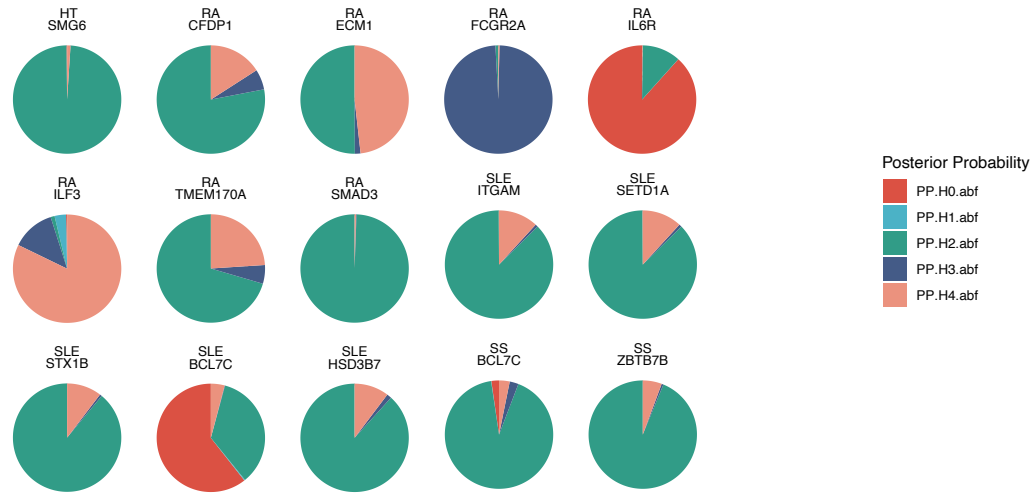


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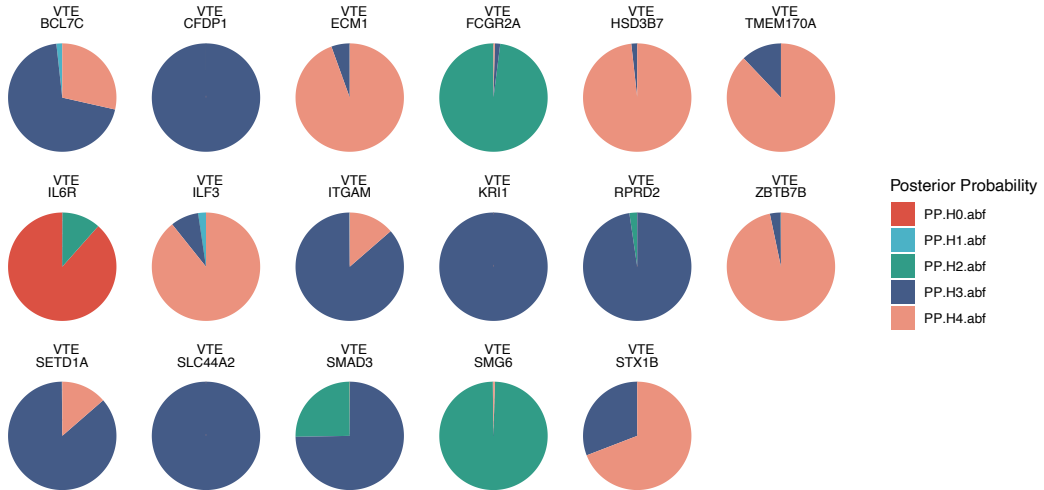
(Approximate) Bayes Factor Colocalization Analyses with Spleen eQTL



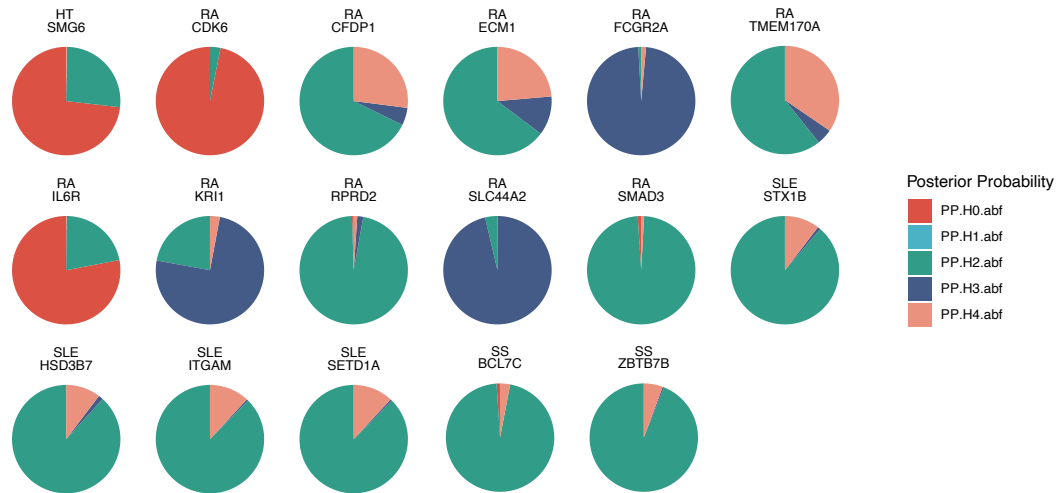
A (Approximate) Bayes Factor Colocalization Analyses with Skin – Sun Exposed (Lower leg) eQTL



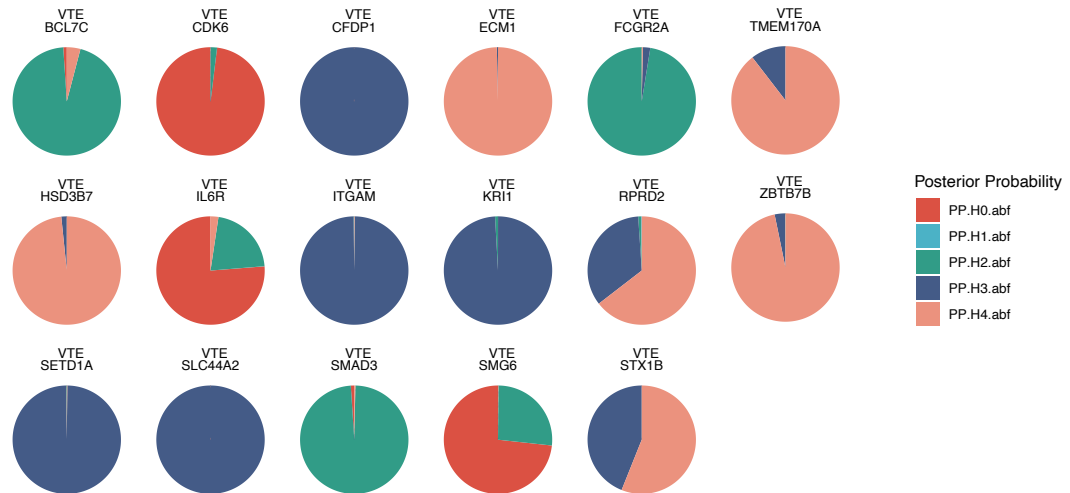
B (Approximate) Bayes Factor Colocalization Analyses with Skin – Sun Exposed (Lower leg) eQTL

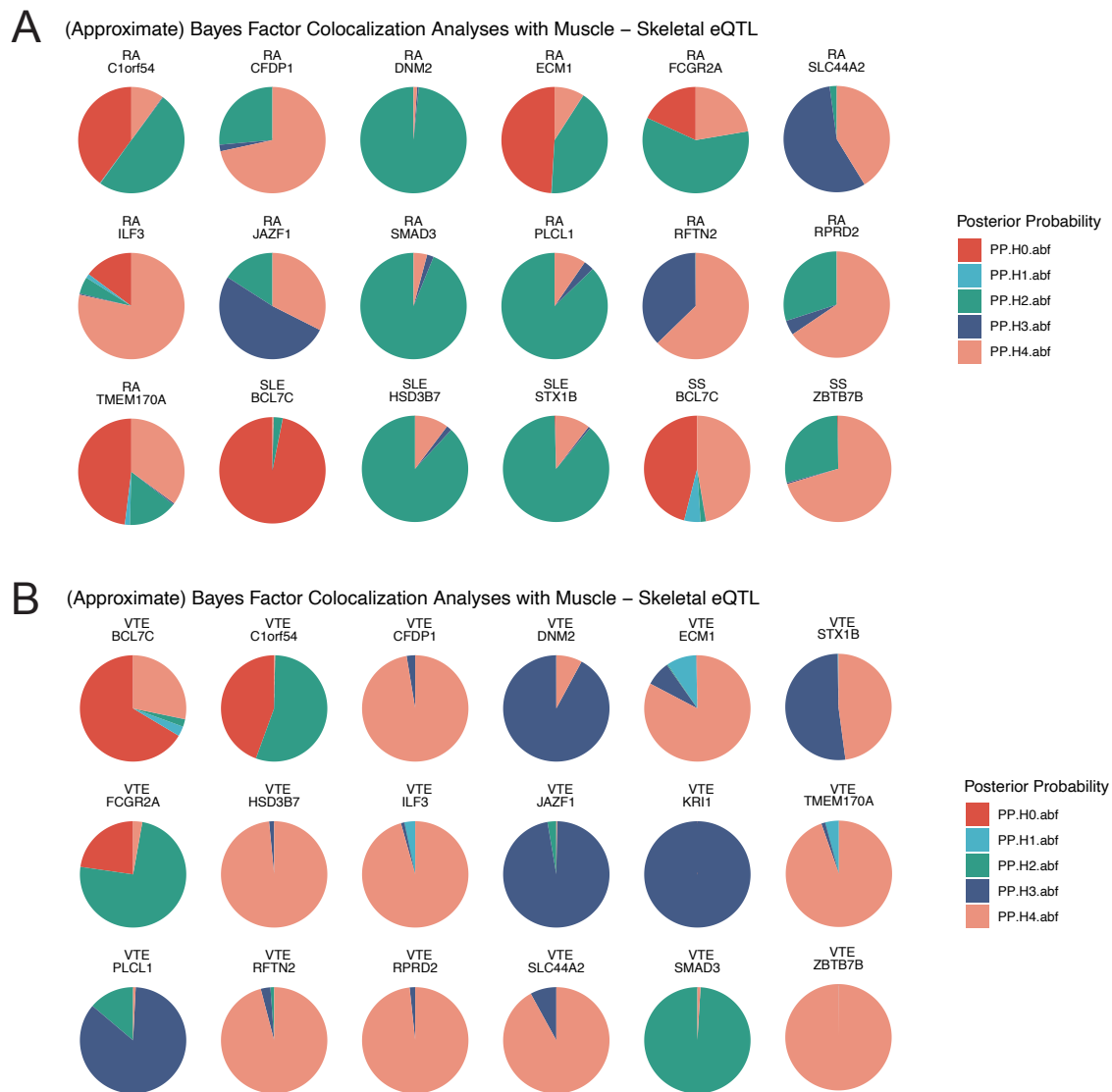


A (Approximate) Bayes Factor Colocalization Analyses with Skin – Not Sun Exposed (Suprapubic) eQTL

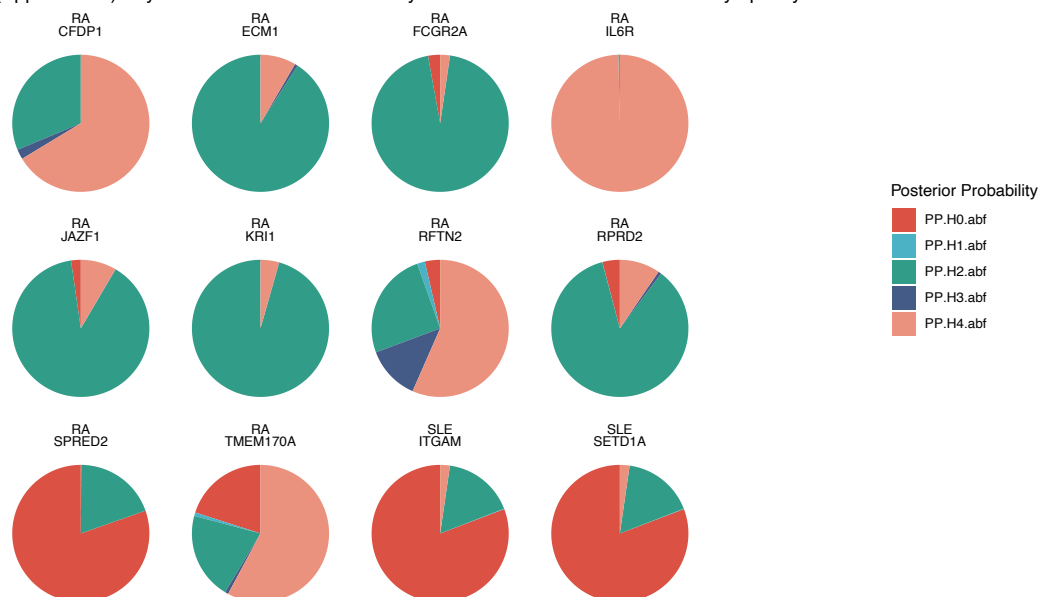


B (Approximate) Bayes Factor Colocalization Analyses with Skin – Not Sun Exposed (Suprapubic) eQTL

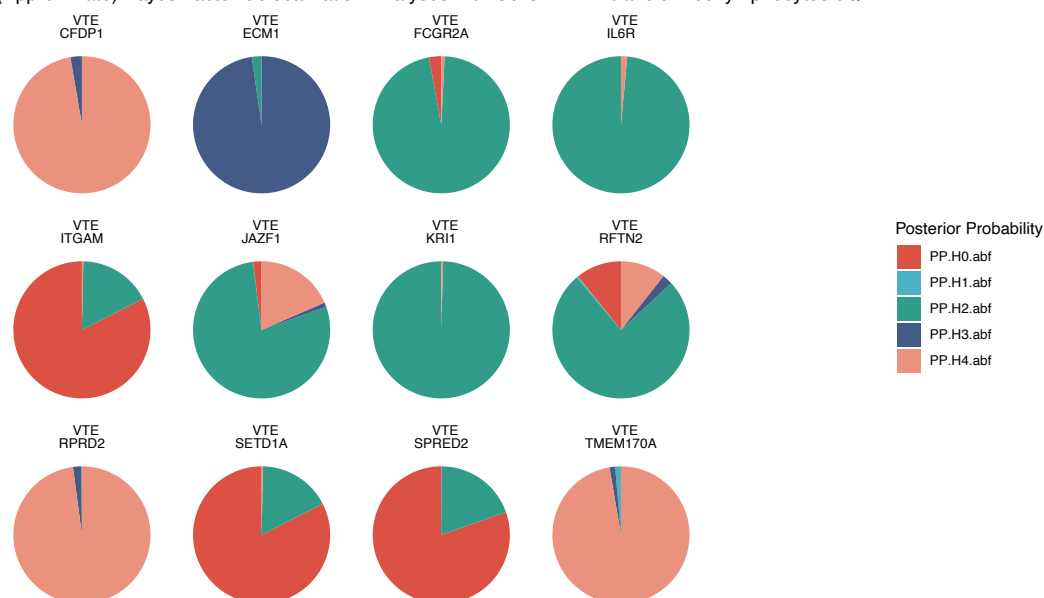


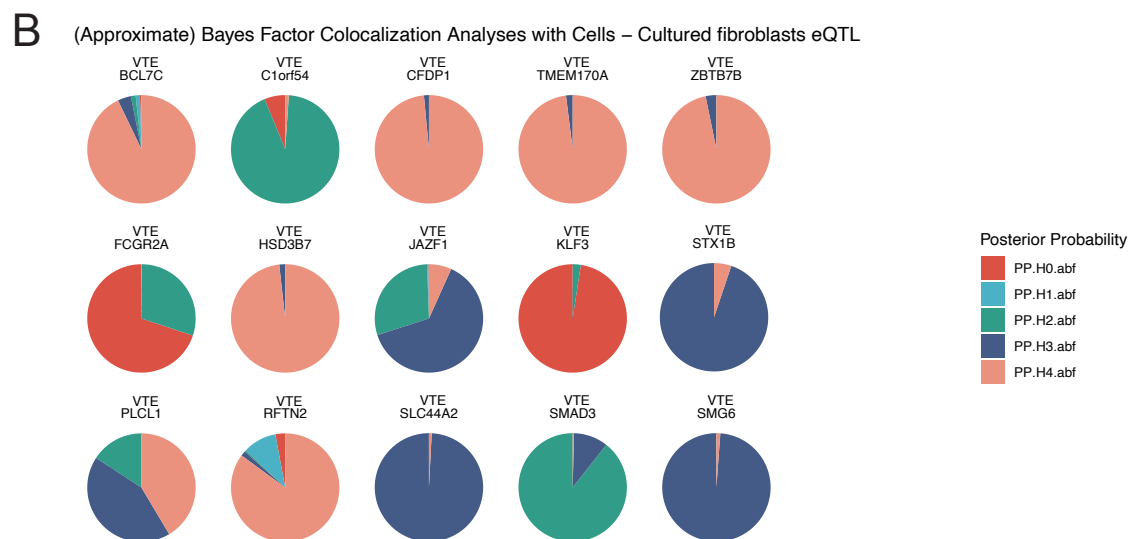
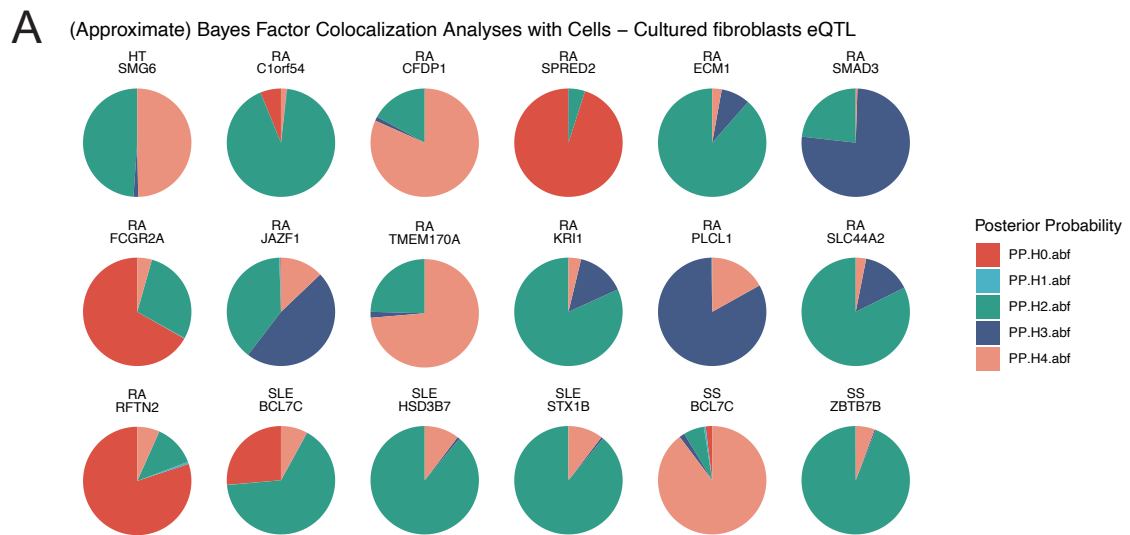


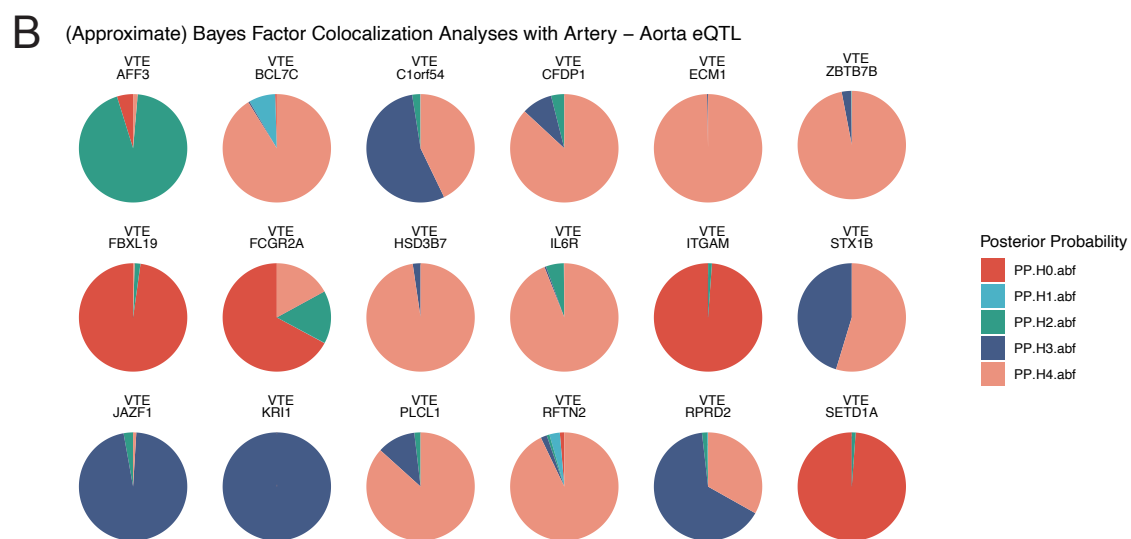
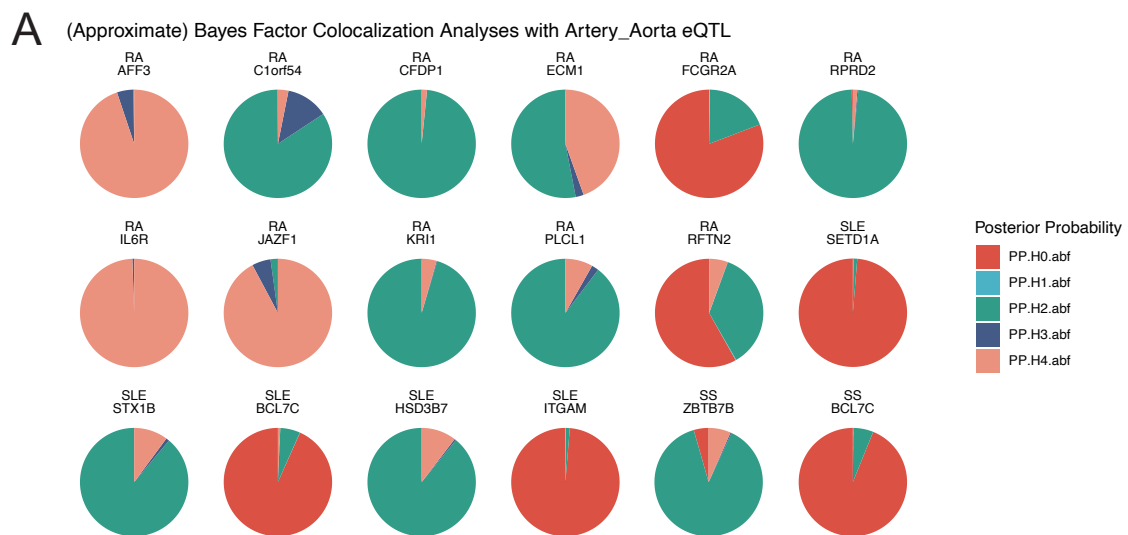
A (Approximate) Bayes Factor Colocalization Analyses with Cells – EBV–transformed lymphocytes eQTL



B (Approximate) Bayes Factor Colocalization Analyses with Cells – EBV–transformed lymphocytes eQTL

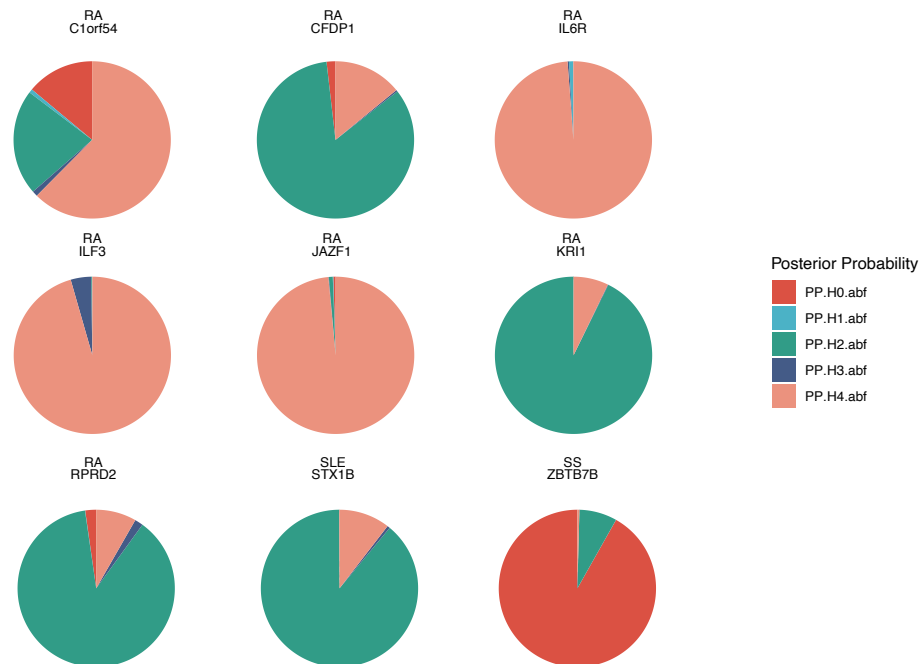






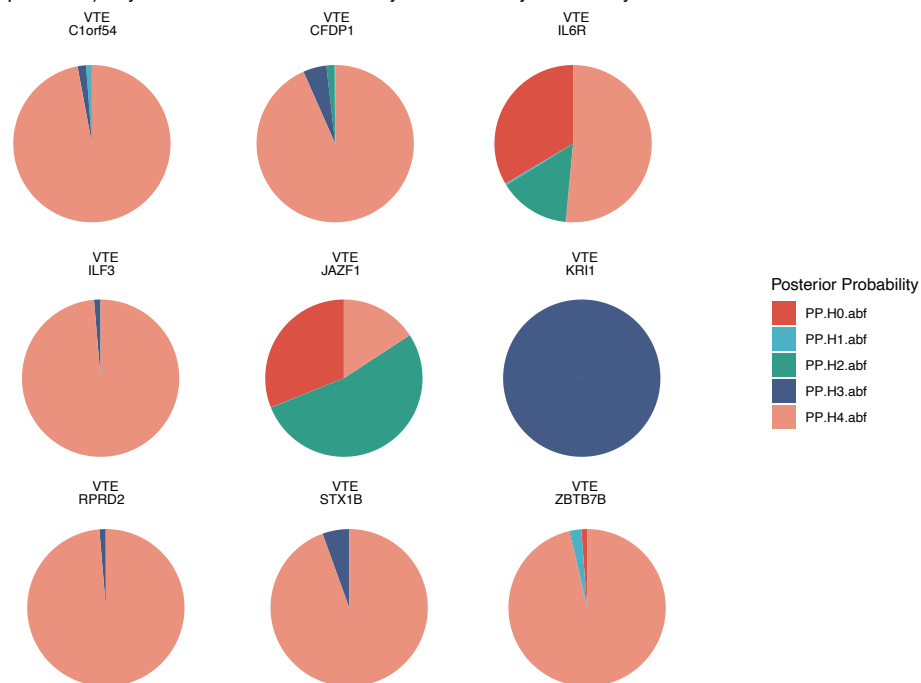
A

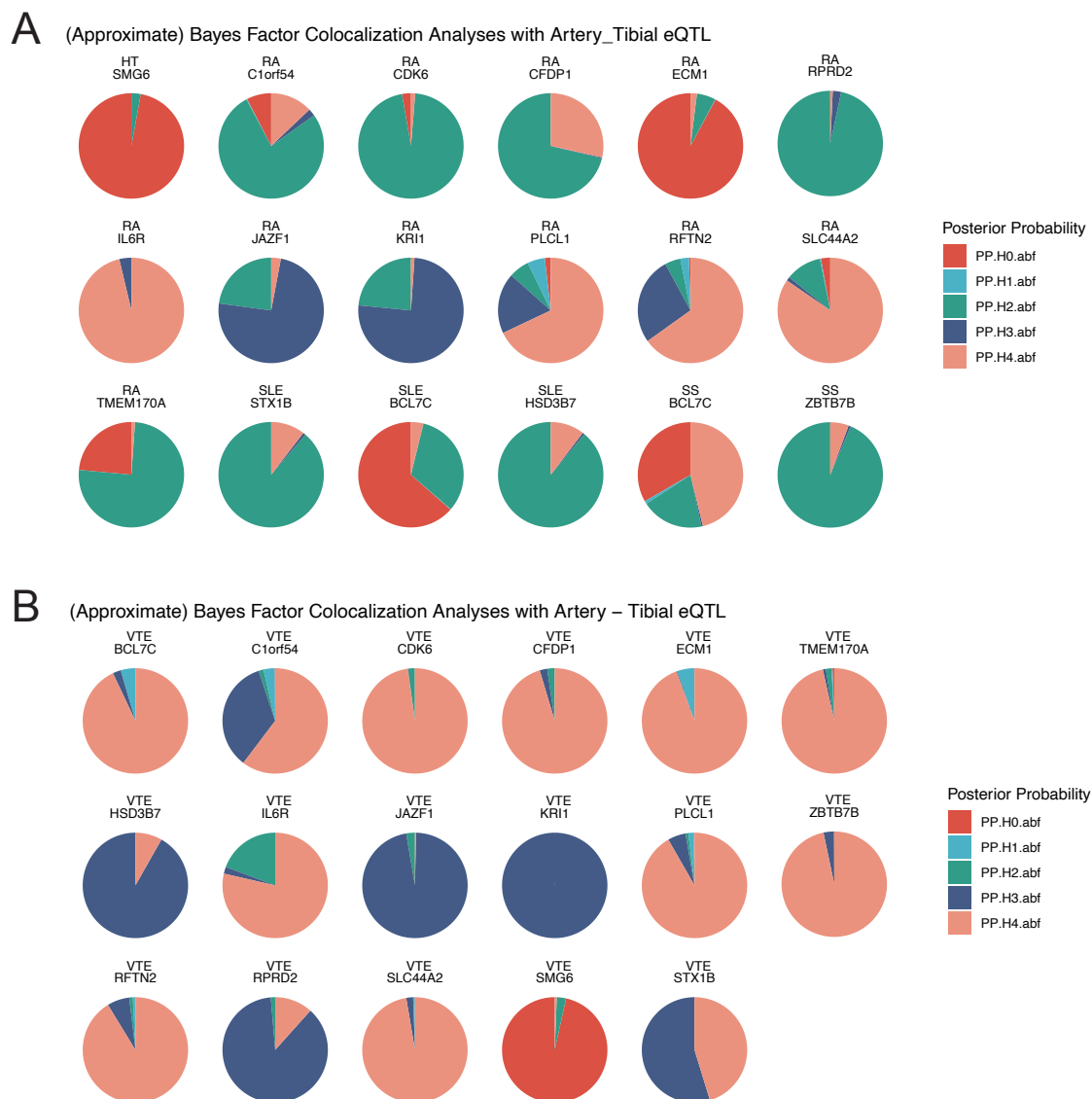
(Approximate) Bayes Factor Colocalization Analyses with Artery – Coronary eQTL

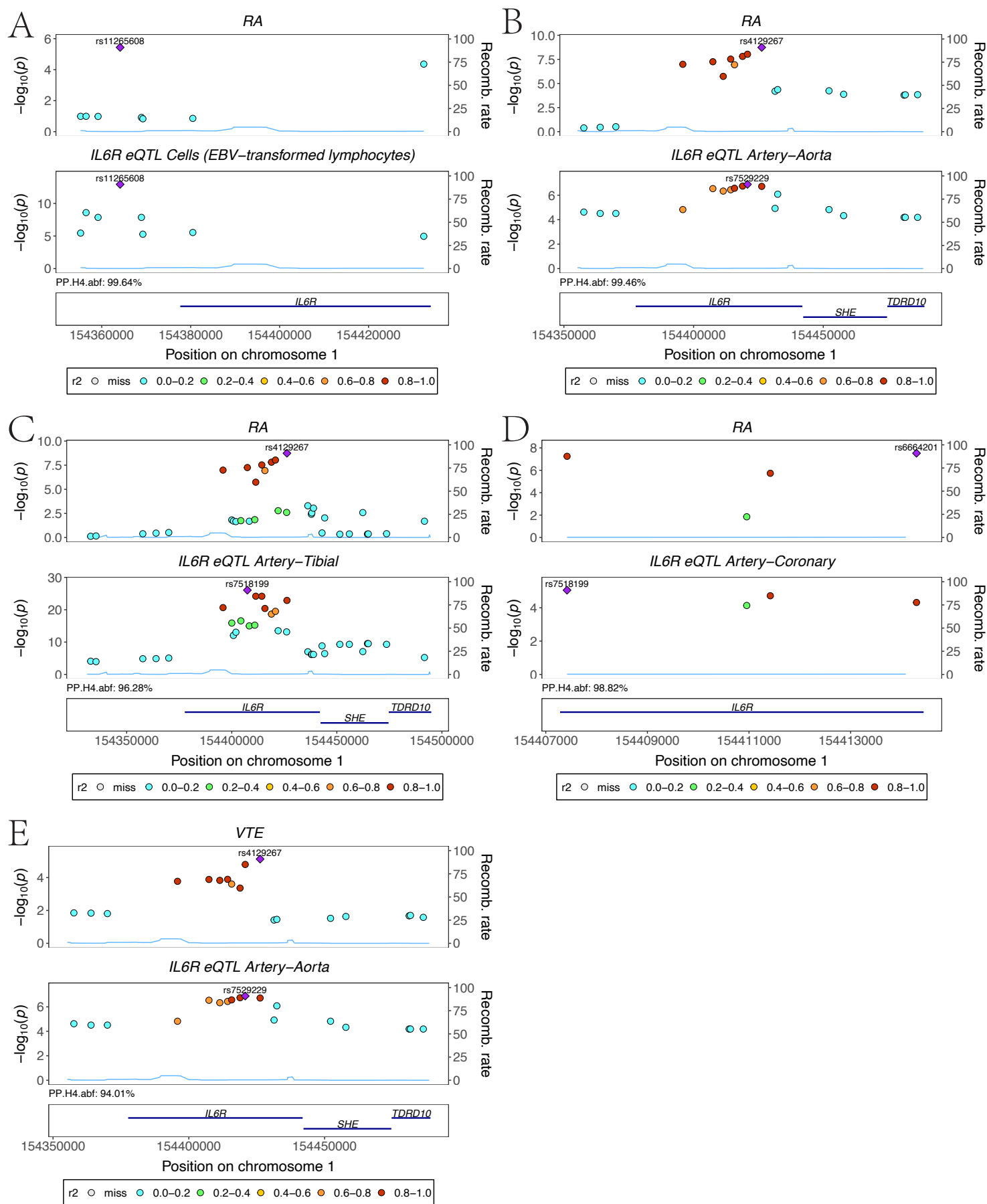


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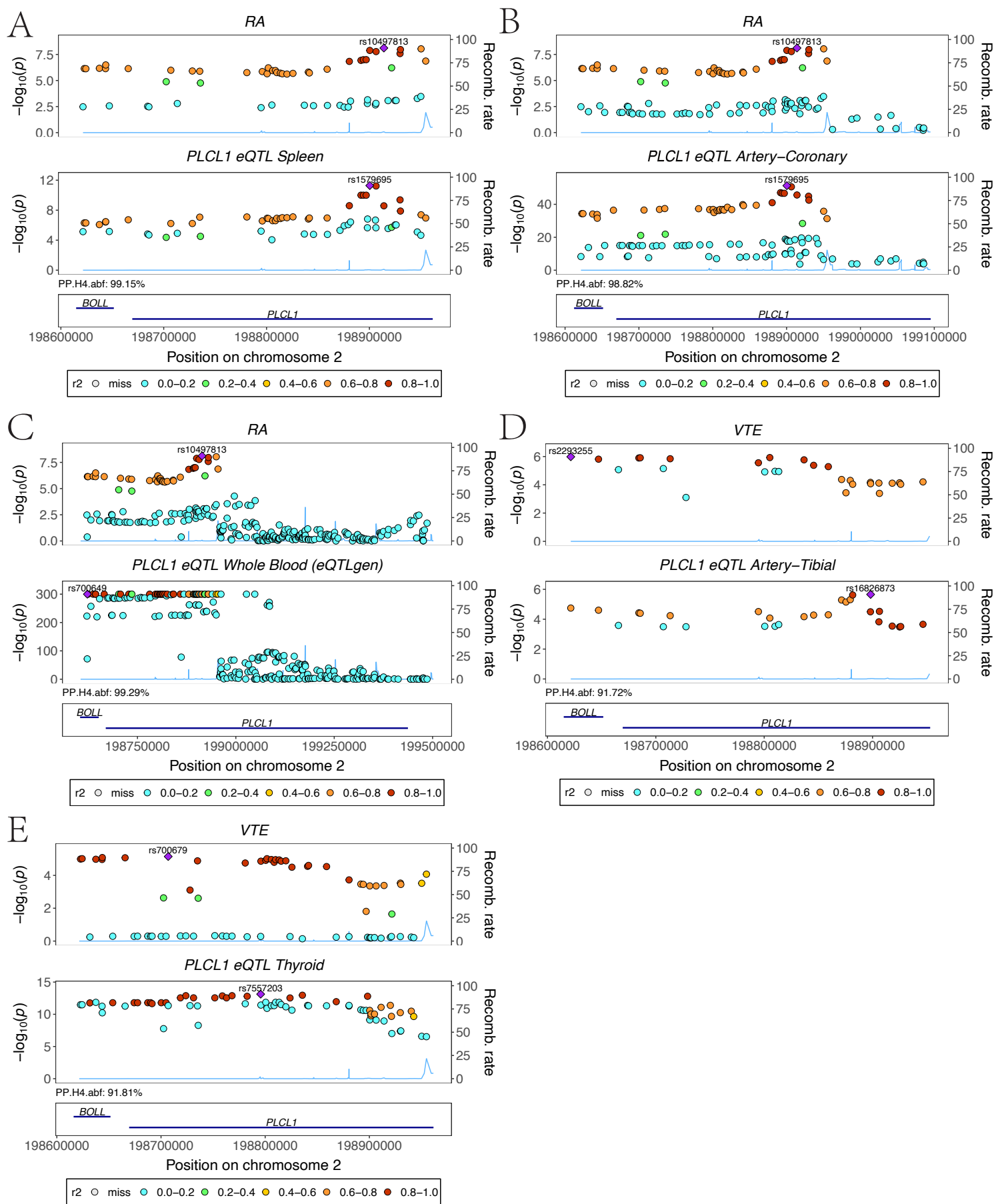
(Approximate) Bayes Factor Colocalization Analyses with Artery – Coronary eQTL





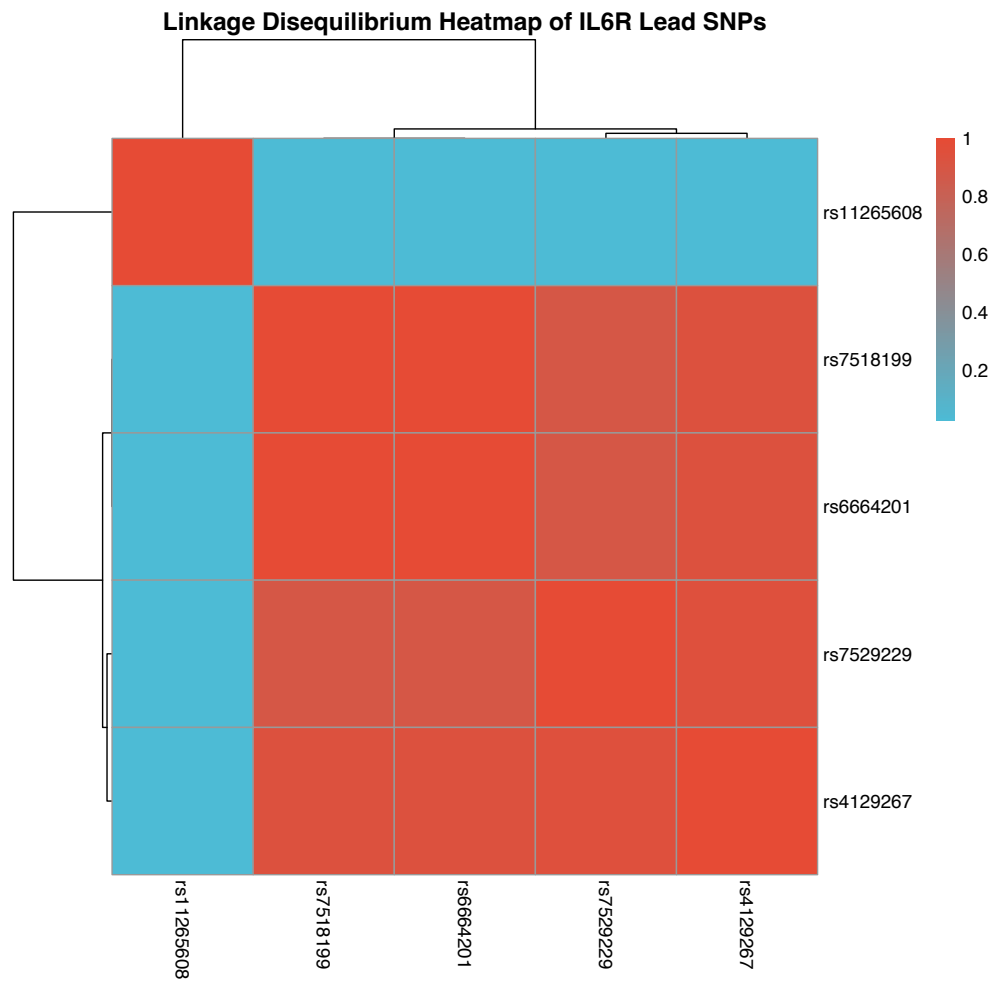


Supplementary Figure 16

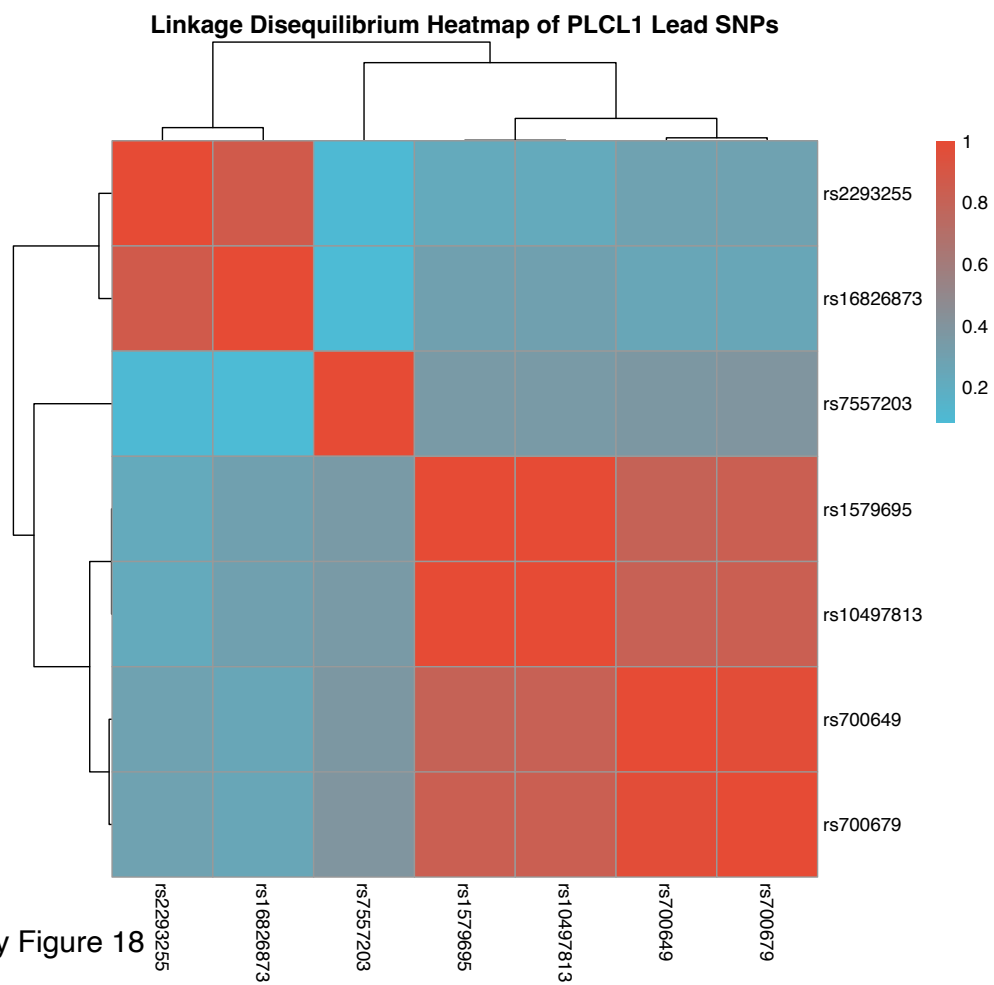


Supplementary Figure 17

A

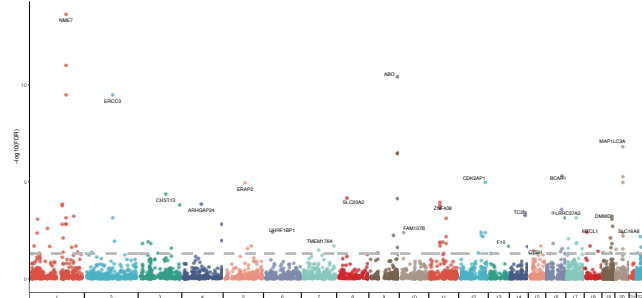


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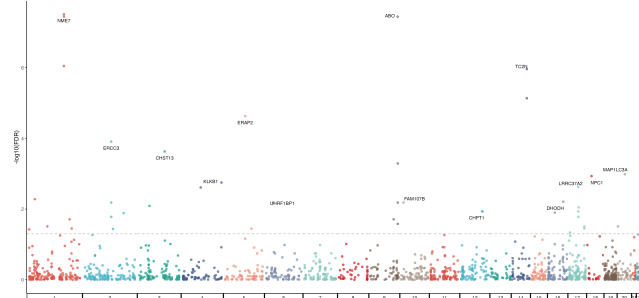
A

eQTL GTEx Artery Aorta and VTE (SMR)



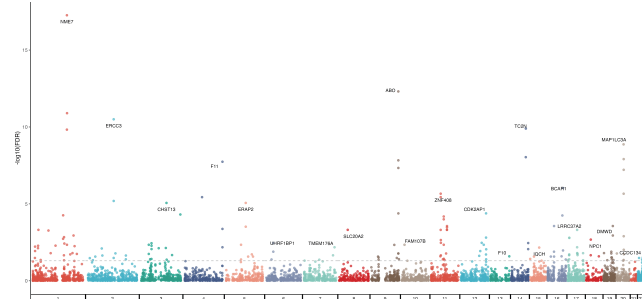
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eQTL GTEx Artery Coronary and VTE (SMR)



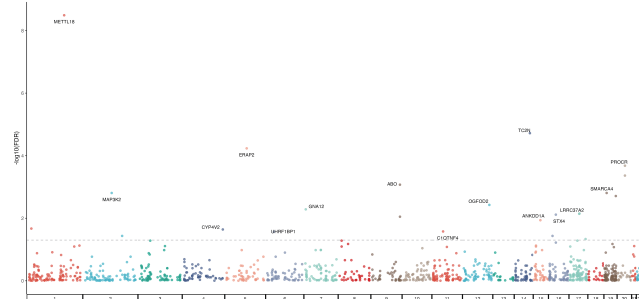
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eQTL GTEx Artery Tibial and VTE (SMR)



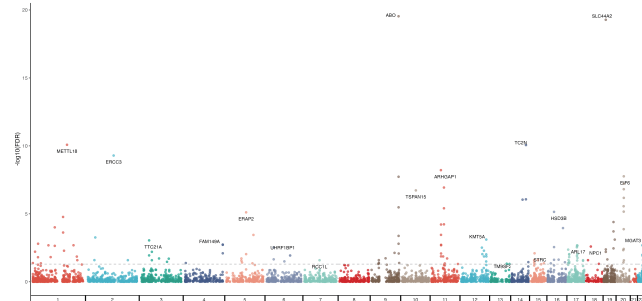
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eQTL GTEx Cells EBV-transformed lymphocytes and VTE (SMR)



E

eQTL GTEx Muscle Skeletal and VTE (SMR)



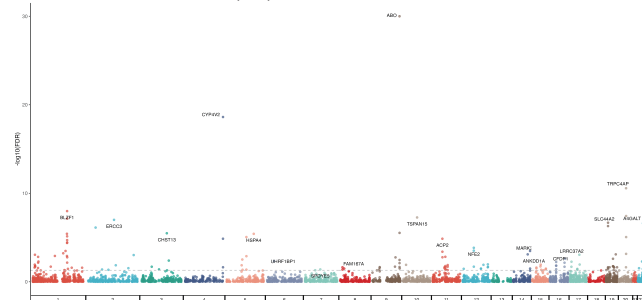
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eQTL GTEx Spleen and VTE (SMR)



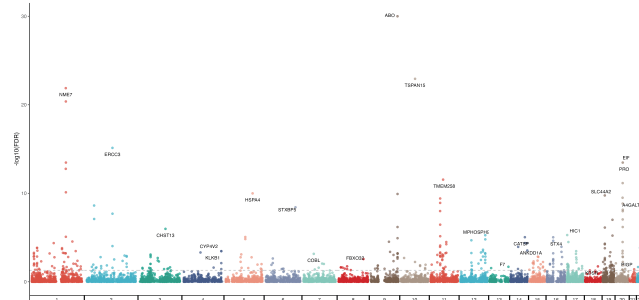
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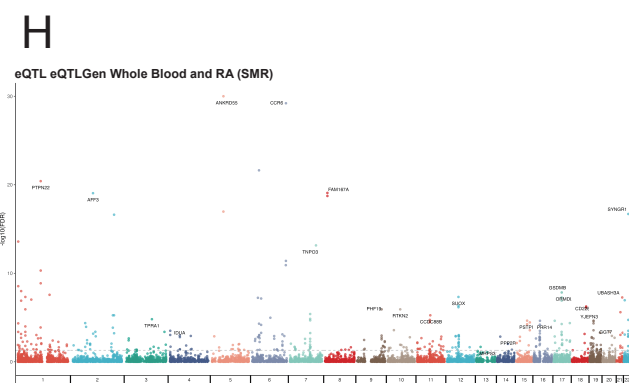
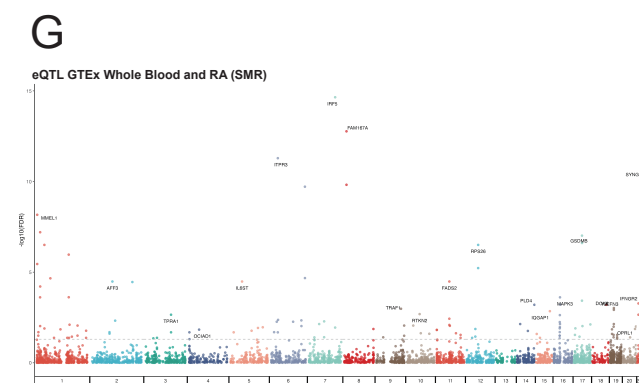
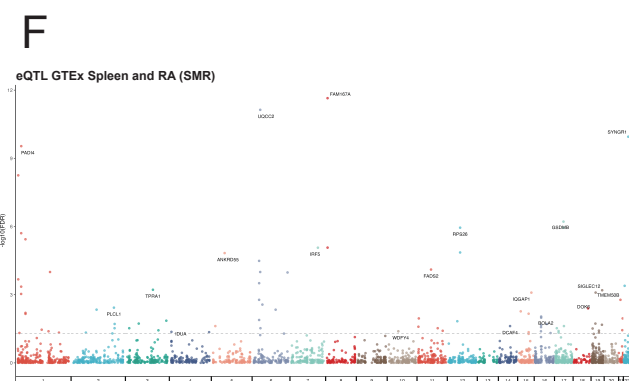
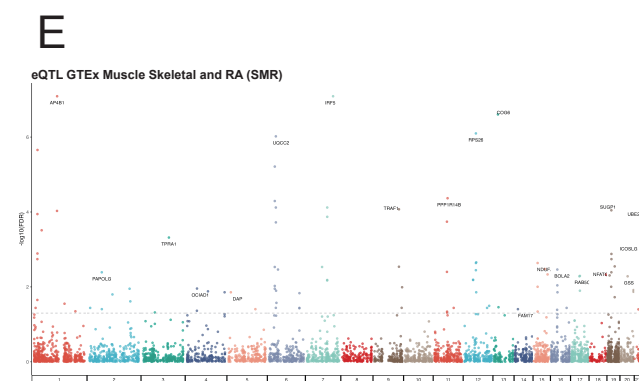
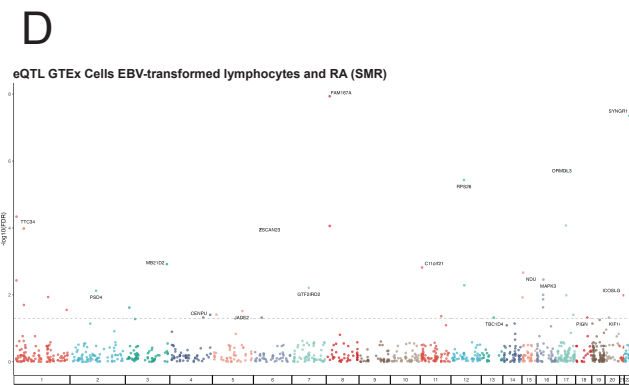
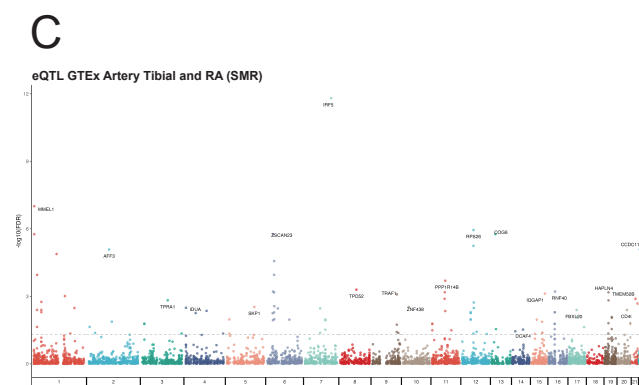
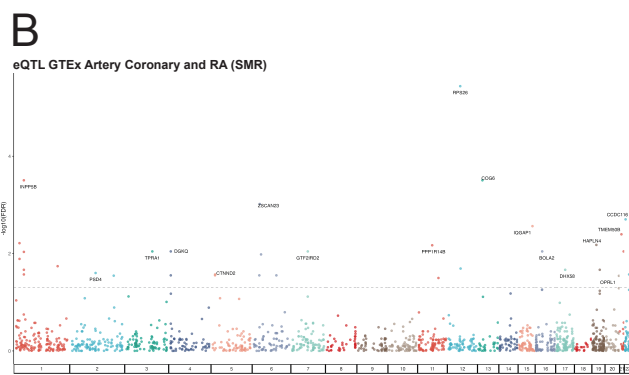
eQTL GTEx Whole Blood and VTE (SMR)



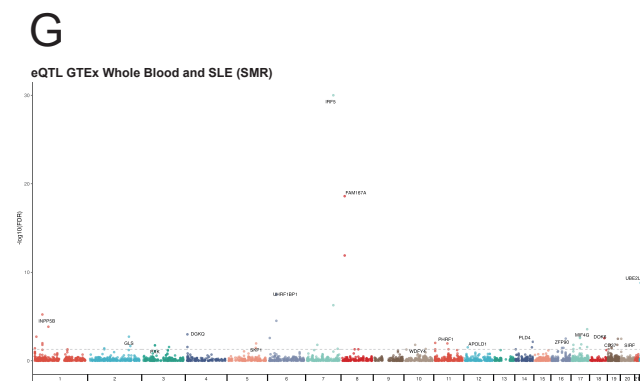
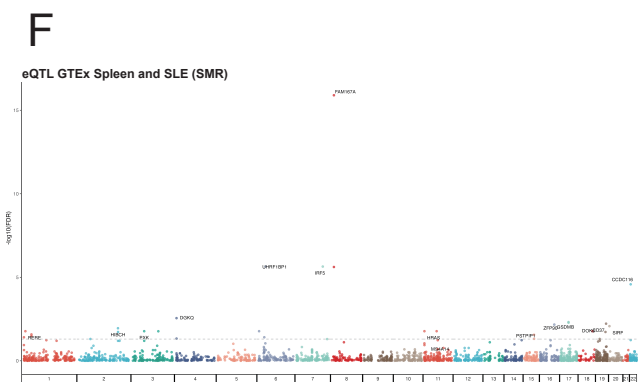
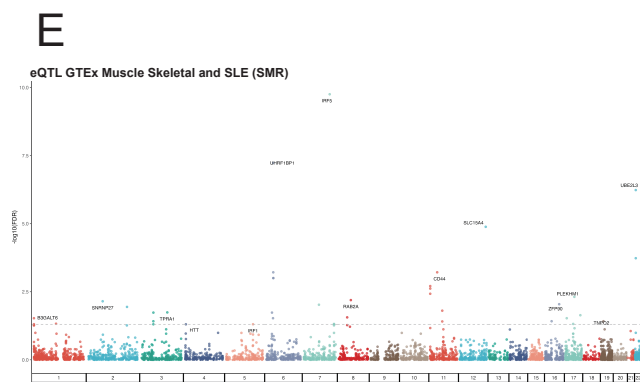
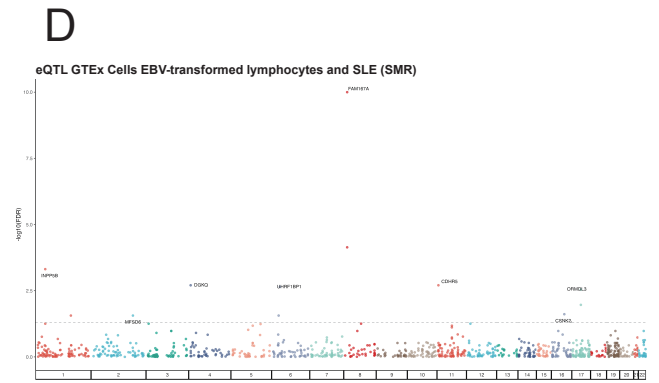
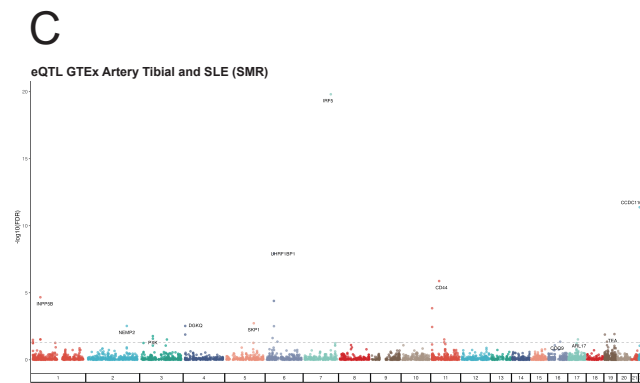
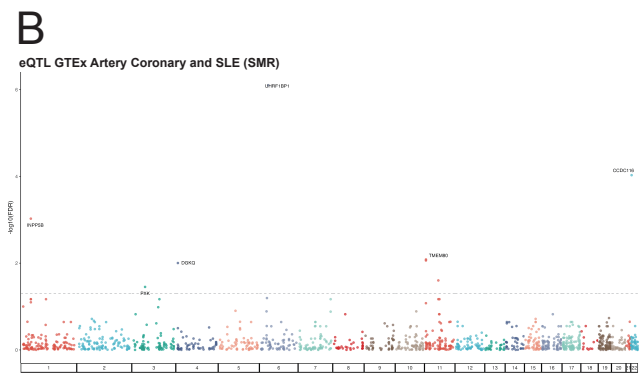
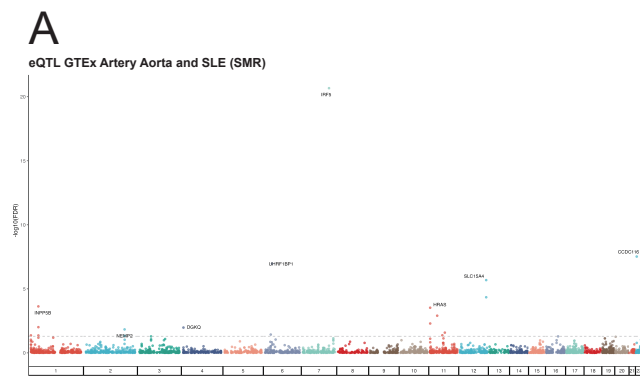
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eQTL eQTLGen Whole Blood and VTE (SMR)

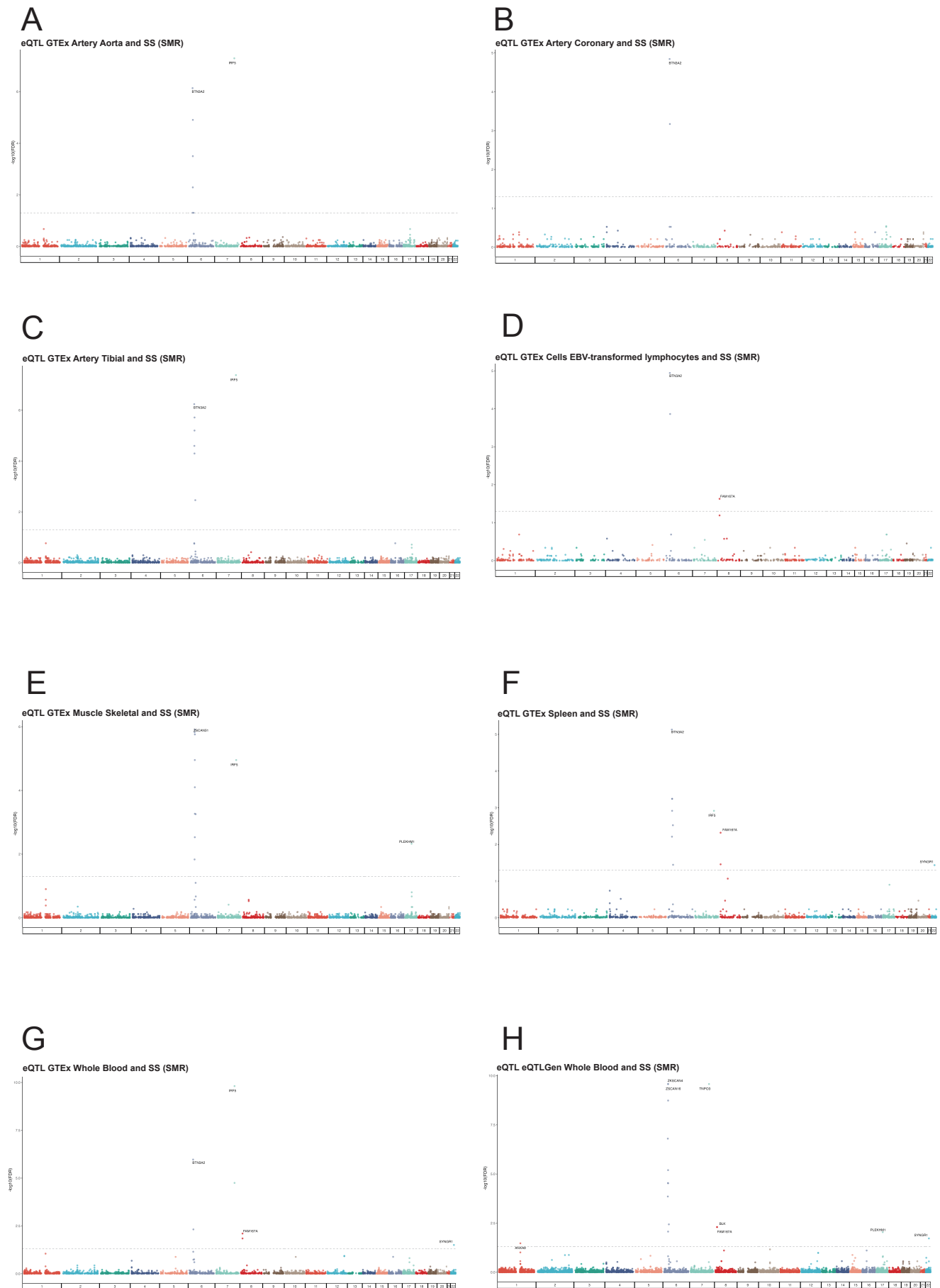




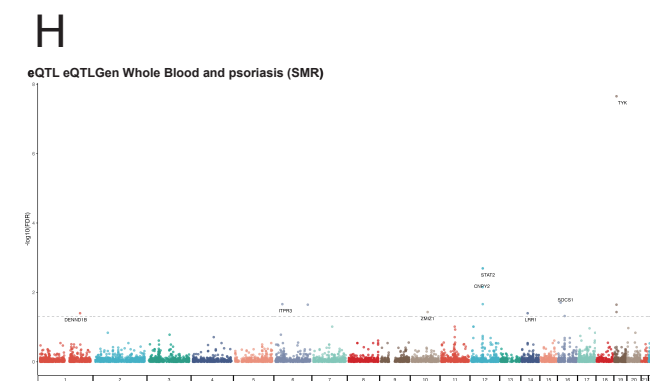
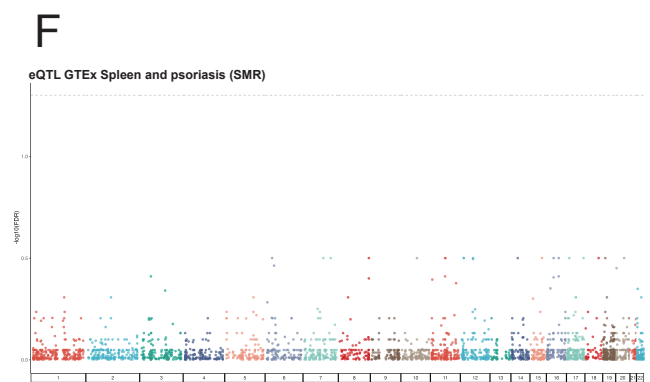
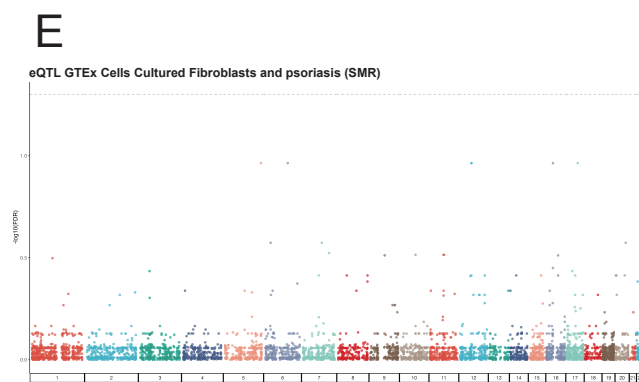
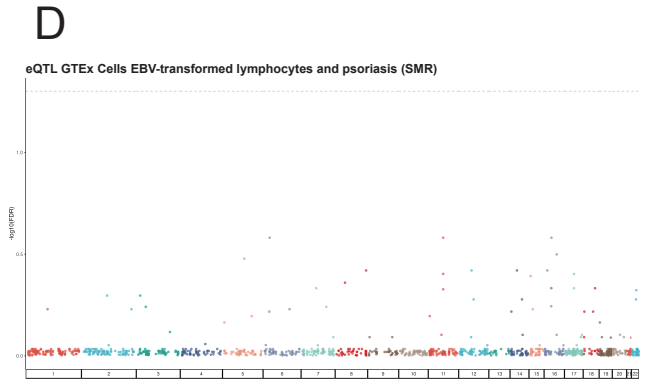
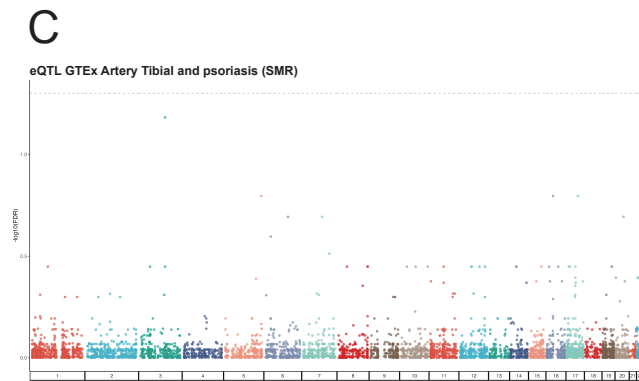
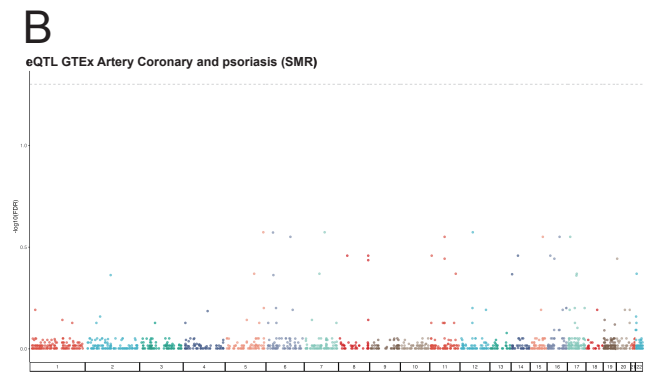
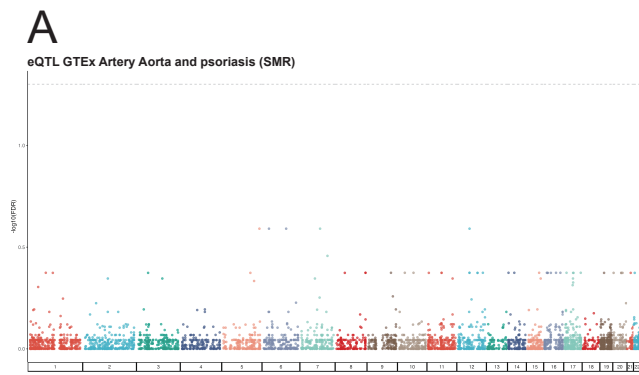
Supplementary Figure 20

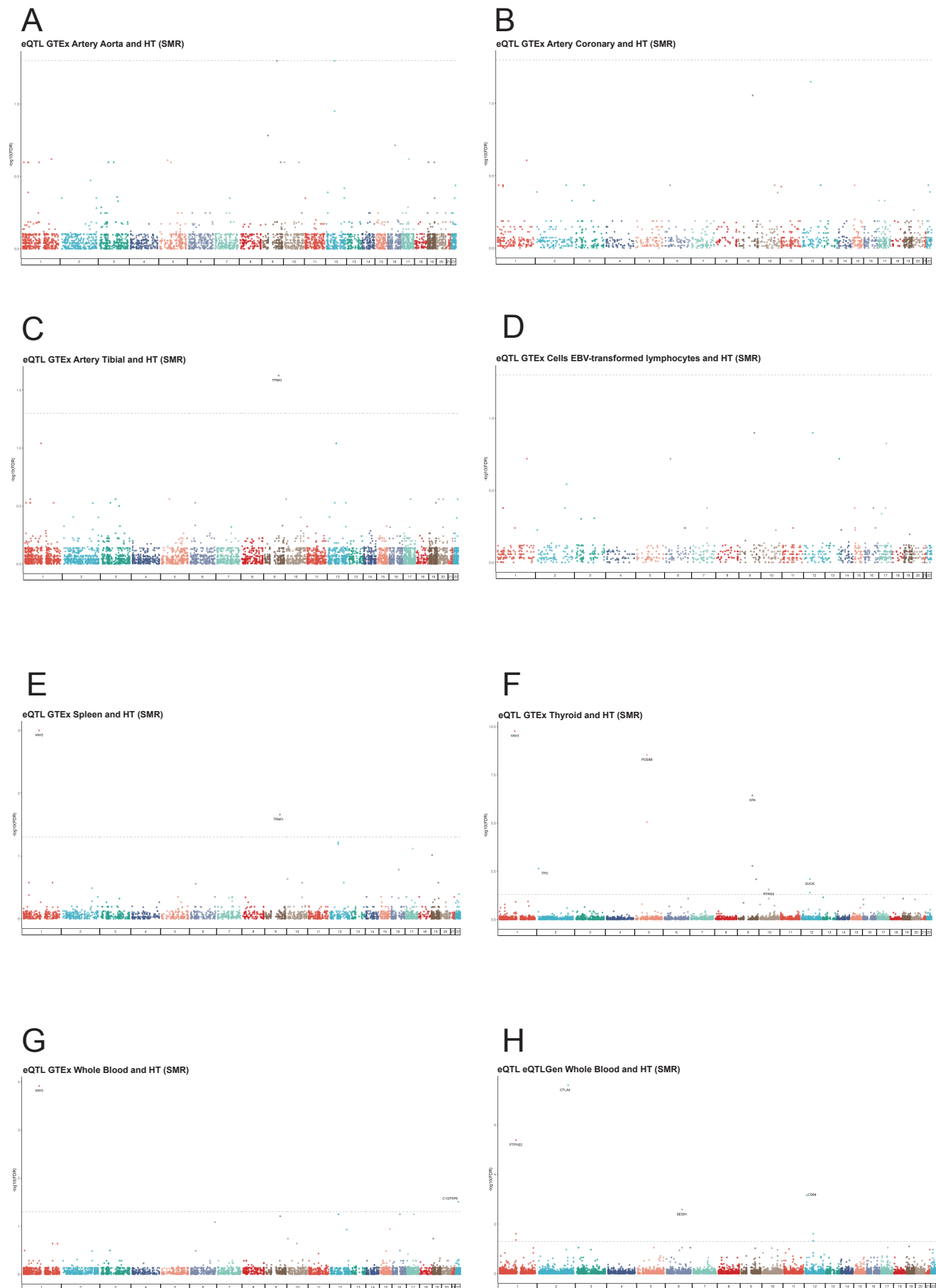


Supplementary Figure 21



Supplementary Figure 22





Supplementary Figure 24